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INDUSTRY WEEK

iamond Black Leaf to Operate Geigy Pesticide Plant in Des Moines, Dec. 1

ES MOINES, IOWA — Plans for amond Black Leaf Company, Cleveand, Ohio, to take over operation of e Des Moines pesticide processing ant of the Geigy Agricultural emicals Division of Geigy Chemical rporation, New York, on December were announced here Nov. 2.

The announcement was made jointly by Loren P. Scoville, president of amond Black Leaf, and Dr. George R. Ferguson, president of Geigy's Agricultural Chemicals Division.

Built in the fall of 1954 at a cost of $500,000 and put into operation early this year (see Croplife issue of Feb. 7, page 5) the Des Moines plant produces insecticides and weed killers for distribution throughout the plains states of Ohio, Michigan, Indiana, Illinois, Kentucky, Wisconsin, Minnesota, Iowa, Missouri, North Dakota,

(Continued on page 20)

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onstruction Plans for Phillips Pacific H3 Plant Progressing Well, Officials Say

BARTLESVILLE, OKLA. — Plans r Phillips Pacific Chemical Comny's ammonia fertilizer plant are ogressing as expected, according to S. Adams, chairman of Phillips etrolieum Company, and Ray C. sh, chairman of Pacific Northwest peline Corporation, which comnies jointly own the recently-formed chemical company.

As announced earlier (Croplife, July 18, page 1) the plant will be located in the southeastern Washington vicinity, but the site has not yet been definitely selected. It was pointed out that the company has taken options on a number of properties and has several additional loca-

(Continued on page 20)

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entral Farmers Fertilizer Co. Announces lans to Operate Phosphate Mine, Plant

CHICAGO — Plans for opening a osphate mine by Central Farmers rtilizer Company on their Georgewn Canyon property and the conuction of a phosphate processing nt are nearing completion accordg to Jos. J. Lanter, president of the mpany.

Construction of a railroad spur om the Union Pacific main line west of Georgetown, Idaho, to the plant site some six miles up the Georgetown Canyon east of Georgetown, will start in the spring, as soon as weather permits. Work will also be started on the construction of the phosphate ore processing facilities. These will include a grinding and calcining plant to convert the raw phosphate ores to

(Continued on page 20)

Potash Deliveries Up 7% Thus Far in 1955, API Reports

WASHINGTON, D.C.—Potash deliveries by United States producers and importers showed an increase of 7% during the first nine months of 1955, over the corresponding period of the previous year, according to information just released by the American Potash Institute.

Total of potash salts was 2,709,714 tons, which contained 1,601,249 tons K_2O, the report states. Potash for agricultural use in the U.S., Canada, Cuba, Puerto Rico and Hawaii, amounted to 1,454,613 tons K_2O contained in 2,470,929 tons of salts, of which 2,244,811 tons were muriate of potash, 4,135 tons manure salts, and 221,983 tons sulphate of potash and sulphate of potash-magnesia. This represents an increase of 2% in salts and K_2O.

Deliveries to the chemical industry totaled 136,360 tons of muriate of potash and sulphate of potash, containing an equivalent of 84,680 tons K_2O, an increase of 30% in salts and K_2O over 1954. Exports outside of North America amounted to 102,425 tons of salts, containing an equivalent of 61,956 tons

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FDA Extends Date Of Miller Law On 33 Pesticides

Revisions Made to Allow More Time for Gathering Data

WASHINGTON, D.C. — The fully-effective date of the Miller Amendment to the Federal Food, Drug and Cosmetic Act has been extended to Jan. 22, 1956, for some twenty pesticidal chemicals, the Food and Drug Administration has announced. A later date of March 1, 1956, has been set as the time when the provisions of the amendment become effective on a group of 13 other chemicals.

In a statement by George P. Larrick, commissioner of Food and Drugs, U.S. Department of Health, Education and Welfare, it was pointed out that "additional extensions of the date on which the statute shall become fully effective are necessary for some of these pesticide chemicals to permit the Food and Drug Administration to process petitions received prior to Oct. 31, 1955, and to permit additional data to be secured to support petitions for tolerances or exemptions from the requirement of tolerances for residues that remain from post-harvest application of certain pesticide chemicals to raw agricultural commodities."

The FDA pointed out that such extensions are necessary in the case of these chemical compounds and that "This section supersedes any

(Continued on page 21)

Velsicol Memphis Plant Suffers Serious Blast

MEMPHIS, TENN.—An explosion at Velsicol Chemical Corp. here Nov. 2 killed one worker and injured 15 others when the blast ripped apart an insecticide works and spewed fumes over the area. One piece of the building was blown 400 yards. F. E. Richardson, assistant plant manager, said he was unable to determine the cause of the blast immediately. He gave no estimate of the loss, which was insured, but said $50,000 "wouldn't touch" the cost of the blast.

Killed in the blast was Vernon F. Wilson, 39, of Memphis, a chemical operator who had been with the firm five years. Two of the injured men were in critical condition Nov. 3. Others were treated for inhalation of fumes and eye irritation caused by the chemicals. Five other persons, including a nurse who helped treat victims, were treated at the hospital for burns or inhalation of fumes. The nurse was one of about 50 physicians and nurses who were forced to work in relays because of the fumes.

A blast at the Velsicol plant Feb. 3, 1954, injured one worker. Several firemen were overcome then by chlorine gas fumes.

acific Plant Food Assn. Stresses eed of Better Sales Promotion and ducational Program for Dealers

By WILFRED E. LINGREN
Croplife Editorial Staff

BEND, ORE.—The fertilizer indusy's needs for an intensification of les effort and a more effective proam of dealer education were the ajor topics of discussion at the sixth nual convention of the Pacific orthwest Plant Food Assn. here ov. 1-3.

Nearly 200 fertilizer manufacturs and suppliers were greeted by an rly season snowfall and cold spell they gathered at Pilot Butte Inn this central Oregon town for the eeting.

Dr. Russell Coleman, executive ce president of the National Plant ood Institute, Washington, D.C., unded the keynote of the convention as a featured speaker during the opening business session Nov. 2.

"We have to develop more effective sales promotion tools to keep up the pace of increasing fertilizer consumption," he warned.

A few hours later, a special committee of the association was hard at work in planning sessions for a fertilizer dealer education meeting in January, the first of what is expected to be a series of such meetings designed to give the fertilizer dealers in this area the information they need to service their customers effectively and sell more fertilizer in so doing.

Frank Meeker, Meeker Hughes Co., Salem, Ore., was elected president of the association, succeeding S. W. Martin, Yakima Valley Spray Co., Yakima, Wash. Named vice president, was Ben McCollum, J. R. Simplot Co., Pocatello, Idaho.

Robert W. Finch, Swift & Co., Portland, was reelected treasurer of the group and Leon S. Jackson, Portland, was renamed secretary.

New directors elected by the membership were Robert Allard, Wilbur Ellis Co., Seattle; Frank Taylor, Oregon - Washington Fertilizer Co., Seattle; Henning Waltersdorph, Magnolia Fertilizer Co., Seattle, and Mr. Meeker.

Hold over directors include Mr. Finch, Mr. McCollum and Mr. Martin, the immediate past president.

Speaking on "Sales Promotion

(Continued on page 20)

Fertilizer's Ability to Cut Production Costs Emphasized At Mississippi Conference

BILOXI, MISS.—That farmers can cut production costs through the intelligent use of fertilizer materials, was emphasized by Dr. Russell Coleman, executive vice president of the National Plant Food Institute, in a talk before the annual Mississippi Fertilizer and Agricultural Assn. at the Buena Vista Hotel here, Oct. 26-28.

In addition to the talk by Dr. Coleman, the three-day fertilizer short course, sponsored by Mississippi State College, featured reports by MSC staff members, the state experiment station and the Agricultural Stabilization and Conservation Program. Some 150 persons attended the meeting.

Dr. Coleman, in stressing the importance of a farmer's using more fertilizer as a means to cut unit costs, pointed out that "this year in Mississippi, with cotton being produced at an average of a bale an acre, the cost of producing each pound of cotton probably will be less than it has ever been before.

"The only way we can continue to increase per acre yields and lower production costs, is to use the fertilizers recommended by the state agricultural experiment station. This also means, in every case, the using of more fertilizer on Mississippi soils than has been used in the past."

Conference delegates voted to continue the backing of the five acre corn contest, which provides that farmers planting five acres of corn are eligible to have their yield measured for honors. For this purpose, the state is divided into three districts with three prizes for each district and also three prizes to the overall state winners.

James D. Arrington, mayor of Collins, Miss., humorist, philosopher and newspaperman, was the after dinner speaker at the banquet.

L. E. Gholston, Mississippi State College, reported on 100,000 soil samples that had been tested in the past five years and revealed the soil fertility shown by the tests. About two thirds of the soil in Mississippi, he pointed out, is low in lime content, and a high percentage, over two thirds, is low in phosphate, excluding the Mississippi Delta area.

It is common knowledge that Mississippi soil is low in nitrogen co Mr. Gholston said, so no tests made on this fertilizer. But the also revealed that half of the is low in potash content, he add

An average corn yield of 99 bu acre was obtained over a nine test period by the Delta Branch perimental farm station, accordi H. V. Jordan, of the State Co In obtaining this yield, the re mended rate of 120 lb. nitroge acre were used, he said. The was made with an adapted varie hybrid corn.

Another Mississippi State Col representative, J. D. Lancaster, the group that one way to incr the use of fertilizer in the s would be to increase the rec mended amounts of fertilizer 25%. At present, he noted, farm are using only about 75% of recommended amounts, and by creasing the recommendation, actual amount used might also increased.

Recent data obtained from n ern Mississippi indicates that w phosphate is being used, it is pos to double the yield per pound of tilizer by placing it in direct co with the seed, L. N. Wise said a of the sessions. However, he tioned, the same is not true of n gen and potash, since high conce tions of these two fertilizers w damage the seed if placed in d contact with it.

The state administrative off of the Agriculture Stabilization Conservation Program, C. W. S van, Jackson, is planning to into effect a policy of public sh ing with the farmers the cost soil conservation. For this progr he said, Mississippi gets about million a year from the federal g ernment. About 30% of these fu he noted, may be used for fertili material to get sod and cover cr established as an erosion con measure.

W. B. Andrews, Mississippi S College, told the convention that efficiency of superphosphate in m fertilizers may be reduced gr by ammoniation. On the other h he said, if un-ammoniated su phosphate is used in mixed fertili the availability of phosphate in mixture is markedly reduced the presence of dolomitic limes in the material.

The group made plans to hol 1956 meeting at Biloxi on Oct. 2

New Mexico Dealers To Hear Talks on Fertilizer Topics

ALBUQUERQUE, N.M.—Two building experts have accepted tations to speak during the ferti portion of the annual conventio the New Mexico Grain & Feed D ers Assn. Jan. 15-17 here.

Clayborn P. Wayne, vice presi of the association and chairma this section of the convention, that Dr. T. C. Longnecker of Texas Research Foundation, Ren Texas, has agreed to speak on basic principles of fertilizing. Phil Leyendecker of New Me A&M College will give an illustr talk on the test plot program un way in the state.

Also under consideration is panel discussion on basic fertili recommendations for New Mex and another panel on sales pr lems and opportunities, says Wayne.

The special program devoted fertilizer topics is being planne the request of a number of dea who are interested in this busi It was first thought that these sions would be held as an adjunc the general convention, but no is agreed that the fertilizer prog will be integrated into the ove schedule.

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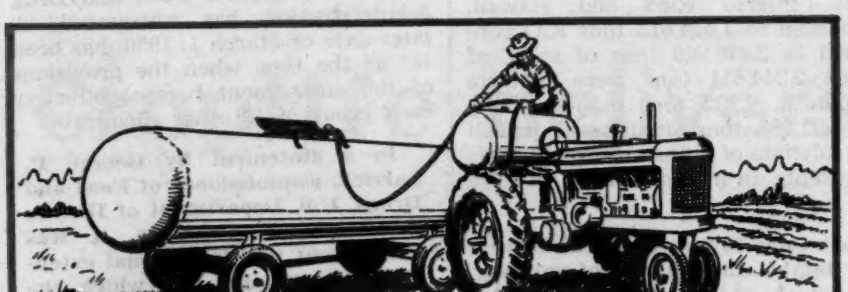

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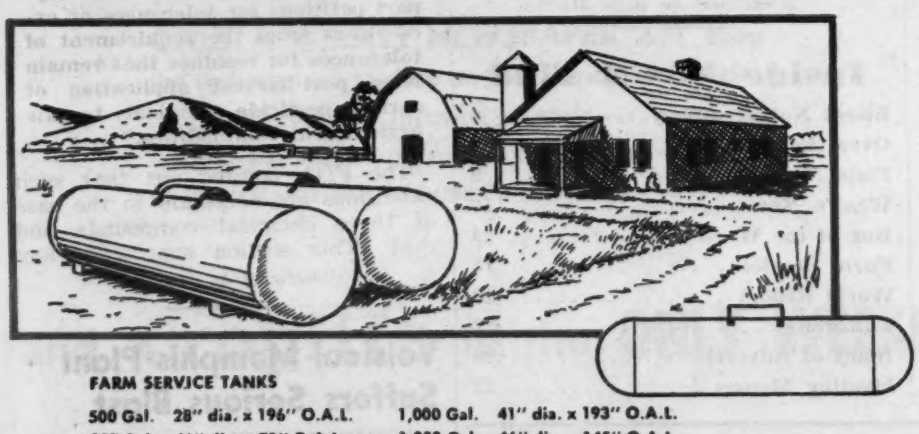

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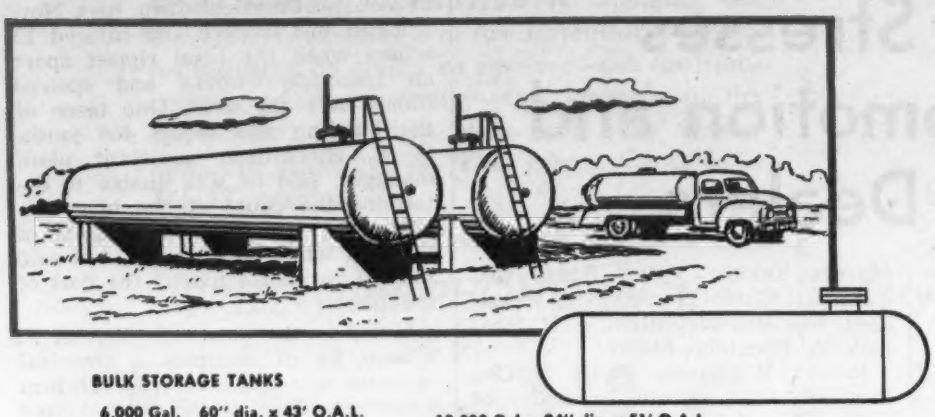

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INSECT, PLANT DISEASE NOTES

Timber in Virginia Threatened by Pests

BLACKSBURG, VA.—The southern pine beetle, epidemic in central Virginia in 1953 and 1954, has subsided somewhat, according to Arthur P. Morris, associate entomologist at Virginia Polytechnic Institute, who says although the pine bark beetles have continued to take a heavy toll of pines throughout the southeast, generally the severity of outbreaks has declined.

However, with dry fall weather, bark beetle activity is expected to increase again. Forest landowners are advised to be on the alert for infestations, particularly in areas where the insects were active last year and earlier this season, and in pine areas affected by recent hurricanes.

A recent 20% aerial strip cruise survey was made of Albemarle, Amelia, Appomattox, Buckingham, Charlotte, Chesterfield, Cumberland, Fluvanna, Goochland, Hanover, Henrico, Louisa, Nottoway, Powhatan, and Prince Edward counties. It was estimated that 4,500,000 board feet of shortleaf and Virginia pines had been killed in the 15-county strip of 3,000 acres from the fall of 1954 to late spring, 1955.

Miscellaneous reports on other insect activity in Virginia include information that venomous black widow spiders continue to be found in different areas; European hornets continue to damage lilacs and fruit trees in some areas; and the box-elder bug, although harmless, is an unwelcome visitor in its search for winter quarters in many homes.

Christmas Trees Damaged By Plant Disease in S.C.

CLEMSON, S.C.—Highlights of insect and plant disease reports from South Carolina for the last week in October, include information that a disease affecting Arizona cypress Christmas trees in South Carolina is regarded as serious. The disease is thought to be Phomopsis juniperovora. Certain strains of trees are showing some resistance to the disease, the reports state.

Chestnut weevils are damaging chinquapin nuts in the state; some armyworms and cutworms are being found in light traps, but the largest collection has been the clay-backed cutworm, with 939 being counted.

Kansas Investigations Reveal Many Insects

MANHATTAN, KANSAS—Spotted alfalfa aphids were found in all fields surveyed in Washington, Republic, Jewell, Mitchell, Cloud, Clay, Ottawa, and Saline counties. Counts of these aphids in alfalfa fields ranged from 10 to 80 per 20 sweeps. A complete Kansas survey in most of the counties of the state revealed that a general infestation of this aphid exists throughout the state, although no infestations of economic importance were found at this time (Oct. 28). Counts ranged from 4 aphids per 20 sweeps to highs of 65 aphids per sweep.

No greenbugs were found in any of the wheat fields that were surveyed in Washington, Republic, Jewell, Mitchell, Cloud, Clay, Ottawa, Saline, and Dickinson counties, nor were any found in the northern two tiers of counties of Kansas west of highway U.S. 81 during the week October 17 to 21.

A survey of Finey, Lane, Scott, Wichita, Greeley, Hamilton, and Kearney counties revealed moderate to heavy infestations of brown wheat mites. Counts on volunteer wheat ranged from 18 to 45 mites per clump of plants. Mite populations in drilled wheat were very low, ranging from 0 to 6 mites per 5 linear feet of row.

Brown wheat mite populations causing noticeable feeding injury to leaves were observed in a few northwest Kansas counties (Somsen and Marvin; Oct. 17 to 21). Examination of wheat fields in eastern Saline County, central Kansas, showed brown wheat mite infestations that ranged from 3 to 20 mites per 5 linear feet of row.

Michigan Makes Plans For Control of Pine Moth

GRAND HAVEN, MICH.—Ottawa County, which annually provides millions of Christmas trees for Chicago and other big markets, is moving with federal and state help to check the European pine shoot moth. Clarence Reenders, chairman of the West Ottawa Soil Conservation District, reports that the moth, first identified nine years ago, is found now in almost every plantation in Ottawa County.

The present plan of action is to set up a number of experimental plots on which several types of sprays as well as different numbers of applications will be tried out.

The course of action was decided at a meeting held at Grand Haven with the district board, Rep. Gerald R. Ford, Jr., and representatives of the Lake States experiment station, bureau of entomology, U.S. Forest Service. Entomologist Ray Janes of Michigan State, also is cooperating.

Present control is a DDT spray, applied by plane. The spray has not been too effective on red pine due to the extremely long needles which conceal the new bud cluster. Most of the life of the moth is spent within the bud cluster.

More than 25 million trees have been planted in Ottawa County alone. About 70% of these are Scotch or red pine.

Shell Chemical Installs New D-D Storage Facility

NEW YORK—Shell Chemical Corp. has installed a 1,260,000-gal. storage tank for its soil fumigant, D-D, at Wilmington, N.C., F. W. Hatch, manager of the agricultural chemicals division, has announced. The new storage tank received its first tanker shipment from Shell Chemical's plant at Houston, Texas, Oct. 28.

From the storage unit, located at the Shell Oil Co. terminal in Wilmington, the D-D will be drummed for distribution to farmers throughout the area. Previously, shipments to North and South Carolina, Virginia, Georgia and Florida had to be made in drums direct from the chemical plants.

High Winds, Storm Hamper Harvesting In Mid-South Area

MEMPHIS — High winds a storms stopped the cotton harvest the Mid-South last week and considerable damage to the crop, tension officials reported.

Before the high winds and hea rains struck the harvest was in f swing with thousands of mechanic and hand pickers in the fields.

The harvest ranged from 98 completed in East Mississippi t 50% in the Mississippi Delta. Extension agents in Arkansas an Missouri also reported fast pro gress in the harvest.

T. M. Waller, Mississippi exte sion cotton specialist, said the u favorable weather caused much co ton to be blown down and the li lost.

Corn and soybean harvesting co tinued during the week, W. Thompson, extension agronomi said.

The agronomist advised farme to complete sod seeding, regardle of the amount of available moistur Sweet potato growers, caught by a unexpected killing frost, rushed com pletion of harvest, according to Che ley Hines, extension horticulturist.

The Arkansas farm picture w different from the past several wee only in a matter of degrees.

The Agricultural Extension Servi said cotton picking was continuin at a rapid pace, soybean harvestin was under way in all areas where th beans are grown, and the rice harve was as much as 90% complete some counties.

Corn harvesting was delayed little in some areas because farme were making feverish use of the goo weather to get all their cotton out.

The cotton harvest was between 6 and 75% complete, an extensio spokesman estimated. Seeding small grains was continuing at a fa pace and prospects look good for big pecan harvest in the state.

In West Tennessee extension o ficials said the weather pushed cotto farmers further behind in their ha vest schedule.

West Tennessee farmers wh have finished gathering their crop are reporting two to two and a half bales to the acre, said T. W Hillsman, Madison County agent. Excellent yields are reported for corn and soybeans.

Heavy rains slowed down cotto picking in Southeast Missouri a 75% of Pemiscot County's cotton ha been harvested.

J. T. Rollins, assistant Pemisco County agent, said the heavy rain would tend to lower the cotton grad as well as put both machine and han picking at a virtual standstill.

Crop Group Elects

NEW BRUNSWICK, N.J.—Georg Stevens, Asbury Park, was electe president of the New Jersey Fiel Crop Improvement Assn. at a meet ing of association directors Oct. 2 He succeeds Lester Jones of Medford Other officers elected were John Waldbusser, Trenton, vice president and H. Edward Hancock, Burlington treasurer. Donald A. Schallock, ex tension farm crops specialist at Rut gers University, was reelected secre tary and Helen Penska, also of th Rutgers staff, was reelected assistan secretary. New directors are Harry Crine, Freehold; William Schauer Englishtown, and Richard Ely Hightstown.

COTTON CONFERENCE SET

FRESNO, CAL.—The fifth annua Western Cotton Production Confer ence will be held here March 6-7 Headquarters will be at the Fresn Hacienda.

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iddle West Soil Group Elects . M. Newman, President

HICAGO, ILL.—W. M. Newman, Chemical Co., Louisville, Ky., elected president of the Middle Soil Improvement Committee he group's 17th annual meeting he Sherman Hotel here, October Plans were outlined for expanded ational activities to help promote ter fertilizer use, and reports presented by MWSIC officers as rt of the annual business meet-

her officers were named at the ting. Richard E. Bennett, Farm ilizers, Inc., Omaha, Neb., was vice president and George sbury, Kingsbury & Co., Indianis, Ind., was elected treasurer.

our new directors were also sen to serve three-year terms. y are J. D. Stewart, Jr., Federal emical Co., Louisville, Ky.; Rob- A. Weis, Virginia-Carolina emical Co., St. Louis, Mo.; L. E. iram, Illinois Farm Supply Co., icago, and E. T. Potterton, Inrnational Minerals & Chemical rp., Chicago Heights, Ill.

ttendance at the meeting surssed that of any previous business ion, with some 250 on hand. Execve and sales personnel of more n 70 fertilizer companies and al- organizations throughout the n belt and outside areas were sent.

Zenas H. Beers, executive secrery of MWSIC reported on proess made by the Committee dur- the past months in its efforts inform farmers in the middlestern states about better and re effective use of fertilizer maials. He expressed appreciation the cooperation of newspapers d radio stations in the area in lping to put over the educational ogram, and said that numerous ograms, both live and tranribed, have been broadcast during e past year to point out the lue of fertilizer in profitable crop oduction.

Mr. Beers reported that more than ,000 copies of a new folder enled, "You Can Grow Profitable rn This Year," have already been tributed, with fertilizer companies warding about half this number dealers and farmer customers.

Various schools are making use of material in vocational agriculture sses, he reported, and extension nts in every county in the 13 midstern states served by MWSIC, also employing the folders as an in their work with farmers.

Increases in fertilizer research at dwestern agricultural colleges and periment stations under MWSICnsored grants-in-aid were also reted by Mr. Beers. Included in the ucational work, he said, are also o new color film strips; one on nd-seeding of legumes and the er on alfalfa production. These are w in work or soon to be released.

The MWSIC secretary emphazed the need for an on-the-farm educational program involving numerous "see for yourself" demonstrations put on for farmers not yet using it and the need for adequate applications among farmers not using adequate amounts of plant food.

In addition to Mr. Beer's report, were those of the group's treasurer; R. G. Fitzgerald, Smith-Douglass Co., Inc., Streator, Ill.; H. E. Wood, Farmers Fertilizer Co., Columbus, Ohio, chairman of the audit committee; R. E. Bennett, membership committee; D. A. Williams, Minnesota Farm Bureau Service Co., St. Paul, literature and film strip committee; and K. W. Wagenseller, Swift & Co., Hammond, Ind., projects committee.

g Increase Seen in and Waterway Use

NEW YORK—Shipments of bulk mmodities on inland waterways l double in the next ten years acding to D. G. Ward, director of nsportation for Olin Mathieson emical Corp. He made his predicns at the launching recently of company's newest barge at the ondale Marine Ways, Avondale, . Built by Avondale at a cost of 0,000 for the company's industrial emicals division, it will handle 1200 s of liquid caustic soda.

Dr. Dwight Williams New Research Director Of Michigan Chemical

SAINT LOUIS, MICH.—Michigan Chemical Corp. has announced the appointment of Dr. Dwight Williams as director of research of the company.

Dr. Williams, who resigned as chief, Biology and Chemical Branch, Quartermaster Research and Development Command, United States Army, Natick, Mass., will be located at the company's research and technical laboratories at Saint Louis, Mich.

With a bachelor of science in chemistry from Ashland College of Ohio, Dr. Williams continued his college work at the University of Michigan where he received a master's degree in chemistry in 1927. He then served as professor of chemistry at Westminster College in Salt Lake City, Utah, for six years, returning to Ann Arbor for his Ph.D. in chemistry, which he received in 1935.

In February, 1936, he joined Westvaco Chlor-Alkali Division of Food Machinery Company at South Charleston, W.Va., as research chemist working on analytical procedures. He left Westvaco after becoming assistant research director with specialization on insecticides, rodenticides, fungicides, germicides and general chemicals.

POOR PECAN CROP

SUNSET, TEXAS—The pecan crop in this area is below normal because of insect damage suffered last summer. The damage was particularly heavy in the creek valley orchards. Growers who practiced insect control will be well repaid for it, because the opening price of 30¢ lb. is the highest opening day price in several years. Last year the first pecans brought 20¢ lb.

PUTTING SELL IN CELERY

The object of every truck farmer is to raise better crops that will sell better in the nation's markets. Modern commercial fertilizers help him do just that.

Potash, an important component of these fertilizers, not only enriches the soil, builds crop resistance to disease and increases product yield, it helps improve the *quality* of crops, too. It helps put more sell in celery, for instance.

U. S. P.'s high-grade muriate of potash has the highest K_2O content and is free-flowing and non-caking—important advantages in the manufacture of fertilizers that help make vegetables a more attractive buy for the American dinner table.

HIGRADE MURIATE OF POTASH 62/63% K_2O
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USDA Clarifies Statement on 1956 Sugarcane Allotments

WASHINGTON—The U.S. Department of Agriculture has issued the following statement intended to clarify an Oct. 10 announcement of the determination of farm acreage allotments for sugarcane farms in Louisiana and Florida for the 1956 crop.

For farms generally, the 1955 proportionate share will become the 1956 farm base. However, where the 1955 acreage harvested for sugar and seed is less than 80% of the 1955 proportionate share, the 1956 farm base will be 125% of such 1955 acreage unless such deficiency was caused by one of the reasons which would qualify the acreage for an abandonment or deficiency payment.

The proportionate share for any farm with a 1956 base in excess of 25 acres will be established by applying to such base an adjustment factor of 87%. While this will represent a 13% reduction from 1955 proportionate shares for these farms, it will be applicable only to farms with bases in excess of 25 acres.

Farms with 1956 bases of 25 acres or less will not be subject to the 87% adjustment factor. Approximately 60% of the sugarcane farms in the mainland cane sugar area grow less than 25 acres of sugarcane. The total acreage of these farms represents about 10% of the total acreage.

The total of the proportionate shares which will be made available under the 1956 crop determination will approximate 267,000 acres. This acreage includes approximately 20,000 acres as an allowance for probable underplantings in individual farm proportionate shares and is the average of such underplantings during the 1954 and 1955 crops.

If underplantings for the 1956 crop approximate the average of the underplantings for the two previous crops, the total 1956 crop planted acreage will be about 247,000 acres as compared with an estimated planted acreage of 282,000 for the 1955 crop.

Witco Chemical Appoints New Purchasing Director

NEW YORK—Earle T. Runcie has been appointed director of purchases for Witco Chemical Co., it was announced recently by Max A. Minnig, Witco executive vice president. In his new position, Mr. Runcie will be responsible for company wide purchasing policies and the supervision of all plant purchasing personnel.

Mr. Runcie will make his headquarters in the executive offices of the company, at 122 E. 42nd St., New York. He comes to Witco from the Continental Carbon Co., a Witco affiliate, where he was special assistant to the executive vice president and manager of oil and gas divisions.

New York Hanseatic Corp. Named Distributor Of "Zebra" Fertilizer

NEW YORK — The New York Hanseatic Corp. has been appointed exclusive distributor of the calcium ammonium nitrate fertilizer "Zebra," manufactured by Farbwerke Hoechst, Frankfurt-Hoechst, Germany.

Hanseatic headquarters are at 120 Broadway. Its Charleston, S.C., sales representative, Alexander M. McIver & Son, will also handle sales of the "Zebra" brand.

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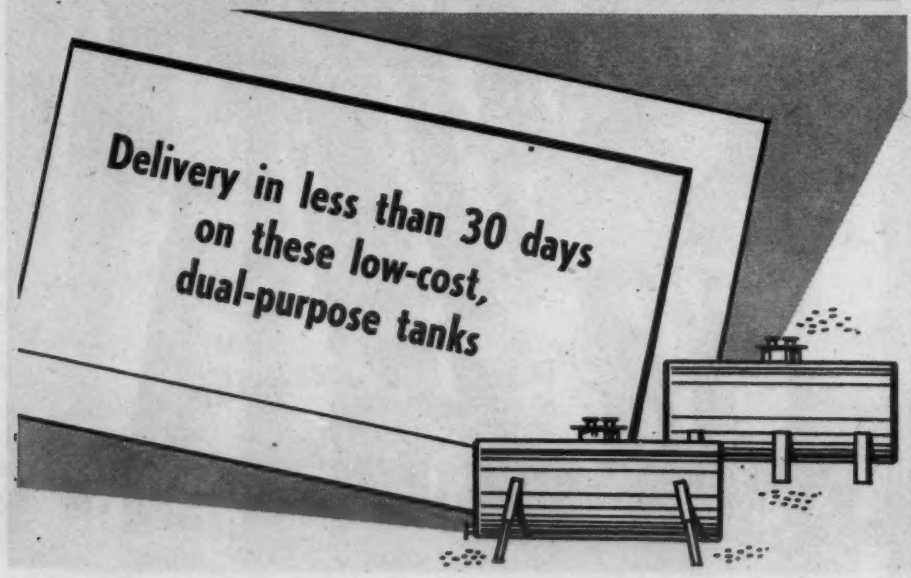

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Without obligation, please send me complete information on low-cost A&C rubber-lined tanks.

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Thomas M. Ware, Nelson C. White In New IMC Posts

NEW YORK—The board of directors of International Minerals & Chemical Corp. has elected Thomas M. Ware to the newly created office of administrative vice president and Nelson C. White as vice president in charge of the corporation's Potash Division.

Mr. Ware formerly was vice president in charge of engineering. His new position will include responsibility for engineering, purchasing, traffic, marketing and mining and minerals exploration. The latter is a newly created function which will result in increased emphasis on the location of new ore deposits, development of existing ore bodies and improved mining methods.

Marketing responsibilities will include market research, market studies leading to further diversification of product lines, sales planning, improved selling methods in the various product divisions and increasing sales volume.

Mr. White as vice president in charge of the Potash Division takes the place of A. Norman Into who recently resigned. He was formerly general manager of the Potash Division and has supervised all phases of the operations of that division for the last four years.

Mr. Ware has been with the corporation for eight years and has been on the general staff as vice president in charge of engineering since July 1, 1952. He graduated from Cornell University in 1940 with an engineering degree. During the war he served as project engineer of the special service division in the research section of the Navy. His business experience prior to joining International Minerals & Chemical Corp. includes engineering with aircraft manufacturers and management surveys.

Mr. White is a chemical engineer with 27 years of experience in the chemical industry. This experience includes the electro-chemical manufacture of sodium, potassium and magnesium products and the mining, beneficiation and processing of potash ores and refined potassium chemicals. Mr. White has been with International Minerals & Chemical Corp. since 1942.

Pennsalt to Build New Organic Fluorine Chemicals Plant

PHILADELPHIA—The addition of a large organic fluorine chemicals plant at Calvert City, Ky. will inaugurate the Pennsylvania Salt Manufacturing Co's projected expansion program, president William P. Drake has announced.

Construction is scheduled to begin at once, and full scale operations of the new unit are expected to begin in 1956.

Its initial products will serve the growing refrigerant and aerosol-propellant fields. Future products from this plant and related facilities at the same location are expected to find uses in plastics, lubricants, metal fluxes, anesthetics, ceramics, agricultural chemicals and new applications in atomic energy.

New Pfizer Center

PORTLAND, ORE.—Chas. Pfizer & Co., Inc., Brooklyn, has announced the establishment of a distribution center here to serve Oregon, Washington, Montana and Idaho. Construction of a new building is underway, and the company expects to occupy the structure next Feb. 1. The company's four divisions, agricultural sales, chemical sales, Pfizer Laboratories and J. B. Roerig & Co., will use the center.

J. H. McNeill

SUMMERS APPOINTMENT—J. H. McNeill has been named production manager of the Summers Fertilizer Co. plant in Sioux Falls, S.D., it was announced by J. E. Totman, Baltimore, Md., president of Summers. Mr. McNeill was associated for 6½ years with the Missouri Farmers Assn. where he was plant superintendent at the Maryland Heights plant for the past four years. A 1949 graduate of the Missouri College of Agriculture with a degree in agricultural chemistry, Mr. McNeill entered the fertilizer industry directly after being graduated from college.

Linden A. Webb New Division Head For Mid-South

MEMPHIS — Linden A. Webb has been appointed manager of the Rio Grande Division of Mid-South Chemical Corp. and will direct distribution of Big N anhydrous ammonia from the company's new 400,000 gal. water-rail-highway terminal near Harlingen, Texas.

Mr. Webb formerly was head of the Farm and Home Education Section of Rio Farms at Edcouch, Texas, where he supervised 12,000 acres of irrigated land which is rented to 100 farm families.

A graduate of Texas A&M College, Mr. Webb has been manager of a grain and fertilizer company at Raymondville, Texas, and once headed the agricultural department of Pueblo Junior College, Pueblo, Colo.

Mr. Webb also served as head of the Crop Demonstration Farm of Rio Farms for two years, operating more than 2,300 acres of irrigated land. During World War II, he served in the infantry in France and Germany. He was a captain during the Korean War.

L. Paul Campbell, Jr., Joins Bradley & Baker

NEW YORK — Bradley & Baker with main offices in New York City has announced the appointment of L. Paul Campbell, Jr., as sales representative at its Norfolk, Va. office. A native of Wilmington, N.C., Mr. Campbell was graduated from Duke University with an A.B. degree in business administration in 1950.

Mr. Campbell was formerly associated with the Atlantic Coastline Railroad Co. in the freight traffic department at Wilmington, N.C., and served later as freight service agent in Albany, Ga.

South Carolina Firm

FLORENCE, S.C.—Florence Lawn Fertilizer Co. was chartered here recently to buy, process and sell fertilizers and fertilizer materials. Robert O'Harra is president of the new firm. Authorized capital stock is $1,500.

ecil H. Wadleigh ew USDA Soils esearch Chief

WASHINGTON — Dr. Cecil H. dleigh, career scientist and adnistrator of the U.S. Department Agriculture, has been named chief, l and Water Conservation Rerch Branch, by Dr. Byron T. Shaw, ministrator of the department's ricultural Research Service. Dr. dleigh fills a position that has been cant since the death of Dr. Robert Salter Sept. 13, 1955.

In his new post, Dr. Wadleigh ill direct and coordinate USDA ils research in 41 states, repreenting all important soils regions the U.S. Headquarters of his anch are at USDA's Plant Instry Station, Beltsville, Md.

Prior to this appointment, Dr. adleigh served in the Soil and ater Conservation Research Branch head of the Section of Soil and ant Relations, a post he has held nce the formation of the section in 54.

In his nearly 15 years with the partment, he has also served as a ientist at the U.S. Salinity Laborory, Riverside, Cal., and from 1951 til 1954 he was head of the Dision of Sugar Plant Investigations Beltsville.

During the past year and a half, head of the Section of Soil and ant Relations, Dr. Wadleigh has dected the research of three major S. soils laboratories—the Salinity aboratory, the Plant, Soils, and Nutition Laboratory at Ithaca, N.Y., nd the Soils Laboratory at Beltsille.

Dr. Wadleigh, 48, is a native of ilbertsville, Mass., and a graduate f the University of Massachusetts. e earned his master's degree in orticulture at Ohio State University nd his doctorate in plant physiology t Rutgers. He was a member of the gronomy staff of the University of rkansas for five years prior to his mployment with USDA.

Dr. Wadleigh is past president of he American Society of Plant Physiologists, an associate editor of the ournal of Plant Physiology, a memer of the Soil Science Society of merica, the Soil Conservation Soiety of America, and Sigma Xi, honrary scientific fraternity.

daho Weed Control Short Course Set

MOSCOW, IDAHO—Idaho's third nnual weed control short course ill be held Nov. 14-19 at the Uniersity of Idaho, according to Lambert C. Erickson, weed research gronomist, who will be in charge f the event. This course is sponsored y the department of agronomy of he university at the request of the daho Noxious Weed Assn.

Between 75 and 100 county weed upervisors, county commissioners, ommercial sprayers, herbicide deallers and federal and state weed conrol workers are expected at the course.

The role of cropping and rotations n weed control will be stressed at he 1955 course. Information on the newer weeds in Idaho also will be presented.

BINDWEED PREVALENT

LUBBOCK, TEXAS—One of the nation's worst field pests, bindweed, is more prevalent in this area than most farmers realize, says Dave Sherril, county agent. To acquaint farmers with bindweed and how it may be eradicated, he recently held two demonstrations on local farms. Thus far most of the bindweed has been found in the Panhandle area north of here.

HIGHER PROFITS from fewer acres

Fewer acres can provide higher profits when the yield per acre is increased through good farming practices. Careful land management, choice of a high-quality seed, continuous weed, insect and disease controls are all very necessary. But, perhaps the most important practice is improving soil fertility. By following a recommended fertilizer and liming program, you will add what the soil requires in the correct amounts. You can increase yield per acre at relatively low cost by increasing your use of nitrogen. A good source of nitrogen in solid form is CSC Ammonium Nitrate Fertilizer.

CSC AMMONIUM NITRATE GIVES TWO-STEP ACTION

CONTAINS 33.5% NITROGEN

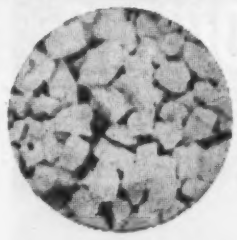
Step 1 QUICK-GROWTH

half of the nitrogen immediately available for rapid early growth

Step 2 SUSTAINED GROWTH

half of the nitrogen released slowly throughout growing season

CSC Ammonium Nitrate Fertilizer is guaranteed to contain a minimum of 33.5% Nitrogen. Two-step action is possible because this 33.5% Nitrogen consists of equal quantities of quick-growth nitrate nitrogen and sustained growth ammonia nitrogen. The illustration shows the exclusive actual size of CSC Ammonium Nitrate Fertilizer. It flows freely, spreads evenly, never clogs or sticks in the spreader. Low-moisture CSC Ammonium Nitrate is specially coated and packed in sturdy bags to prevent caking or lumping during storage. Spend your fertilizer dollar wisely—look for CSC's green and white bag the next time you buy fertilizer.



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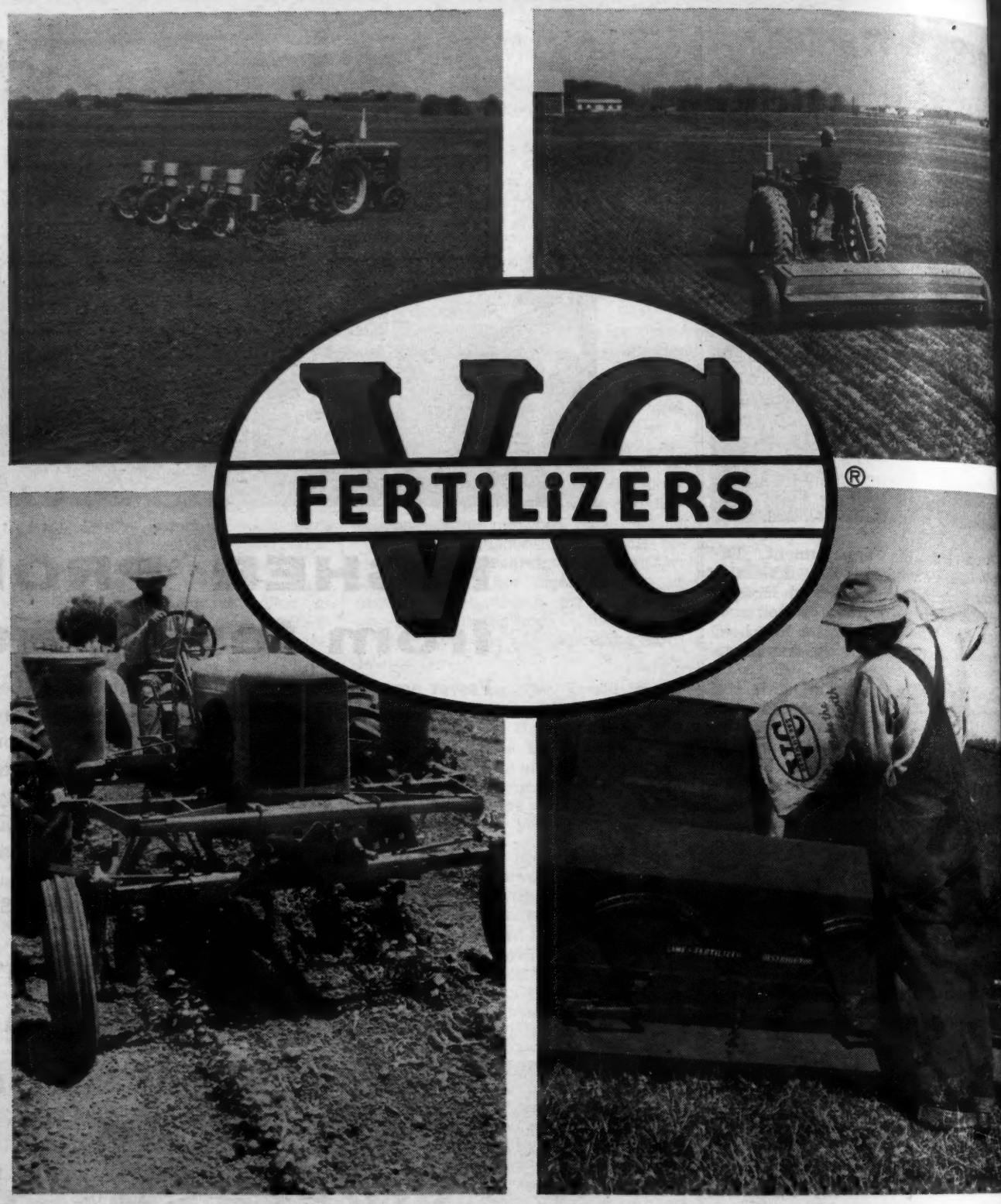

You'll make more profit with the right fertilizer for each crop...

Each crop needs definite amounts of certain plant foods to make vigorous growth and produce profitable yields. The soil usually contains some of these plant foods but often not enough to grow the yields you want. The right fertilizer makes up the difference. You avoid waste and save money when you use fertilizers that supply the particular plant food needs of your crops on your soils. You make more profit because all you buy is essential crop-producing power. That's why so many leading farmers prefer V-C Fertilizers. V-C manufactures many different analyses and combinations of plant foods to provide the right fertilizer for each crop on each soil—the *right* fertilizer to grow big profits for you!

See Your V-C® Dealer

Get the facts on the complete line of V-C Fertilizers, produced in a V-C factory located near you, for crops and soils in your vicinity. Ask about top-quality **V-C PROLIFIC,** the superior blend of better plant foods fortified with important minor elements lacking in many soils. V-C Fertilizers and V-C Superphosphates are backed by more than 60 years of experience in serving millions of farms in many states.

IT PAYS TO BE A V-C DEALER!

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Special Retail Section

Better Selling

Richer Fields for Dealers

A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

Campaign for Rice Fertilization Helps Texas Dealer Build 1,500 Ton Volume

By RUEL McDANIEL
Croplife Special Writer

Ten years ago less than five per nt of the rice land around Bay City, exas, was fertilized. In that year ulf Coast Rice Farms, Inc., stocked s first fertilizer and started a sys- matic campaign to show rice farm- s that they could grow more rice r acre by using fertilizer.

Today more than 95% of all rice nd in the trade area receives ferti- zer for each crop, and Gulf Coast ice Farms, Inc., sells about 1,500 ns of fertilizer annually, mostly to ce farmers, according to C. C. illis, manager.

Furthermore, the rice farmers who oneered the use of fertilizer in the ea used about 75 lb. to the acre. oday the average is around 200 lb. he promotion program, over a ten- ear period, by Mr. Willis and his mpany receives much of the credit r this increase.

"What is more important," Mr. illis stresses, "is that rice produc- on has increased in proportion to e increase in the use of fertilizer, hich is direct proof of the economy f fertilizing already-rich rice land."

Working closely with the rice ex- erimental station near Beaumont, exas, about 150 miles east of Bay ity, Mr. Willis set up a series of ce-fertilizer demonstrations near ay City on his own land or acreage wned by other members of the cor- oration.

Officials of the experiment station ssisted in selection of the plots to e fertilized, recommended the mount and kind of fertilizer to be sed on each plot and kept records n fertilization and results.

Thus as a demonstration plot howed unmistakably the value of ertilizer, the company had official nd verified proof of the fertilizer sed and of the increased yields re- ulting.

Obviously rice farmers in the area atched these demonstrations with rowing interest, and each year more armers were persuaded to try at east their own experimental plots o prove for themselves the value of ertilizer.

The company has been planting hese demonstration plots for ten ears now, and it continues to do so. hey have become a part of the rice ndustry in the county and farmers ow do not question the value or the uthenticity of any demonstration he company makes on fertilizers or eeds.

Annually for ten years the com- any has been holding a field day and arbecue on the site of some of its ertilizer demonstrations. The first vent of the kind followed the com- any's first small demonstration with fertilizer, and interest in the vent has mounted steadily from that irst year. Today the annual field ay is an event that attracts visitors rom throughout the costal rice belt.

It occurs just before the start of arvest, so that the demonstration lots are at or near maturity and isitors can see for themselves the esults of fertilizers of various kinds nd amounts and compare each with djacent acreage without fertilizer.

Augmenting its demonstrations and annual field days, the company advertises fertilizers consistently during the planting and pre-planting seasons, specifying formulas recommended locally, based on findings at its own experimental plots and seen by most rice farmers.

Besides newspaper advertising, the company uses a modest amount of direct mail material, particularly letters accompanied by folders supplied by manufacturers. This material goes to all rice farmers operating in the trade area.

"As a result of this continuing promotion program, our fertilizer business has grown every year," Mr. Willis points out. "This year is better than ever, since the reduction in rice acreage gives us added argument for the use of fertilizer to increase the yield per acre."

TEXAS DEALER—H. H. Parker, salesman for Gulf Goast Rice Farms, Inc., is shown above discussing fertilizer with a young rice farmer. A systematic campaign by this firm over a 10 year period is given much of the credit for a big increase in use of fertilizer on rice in the Bay City, Texas area.

SHOP TALK OVER THE COUNTER FOR THE DEALER

By EMMET J. HOFFMAN
Croplife Merchandising Editor

Farm income is down and every farmer is studying ways of cutting costs. A classic example of putting the cart before the horse is the case of the farmer who thinks first of cutting out one of his major expenses—his fertilizer bill. Almost as much of a problem for the dealer is the farmer who announces that he plans to cut the fertilizer percentage or use less-than-recommended applications.

Dealers of course can see the fallacy in such thinking but it takes some real selling effort to persuade the cost conscious farmer to continue using, or to adopt recommended applications of fertilizer. It behooves the alert dealer to have some ready answers when the cost situation is brought up.

The dealer might attempt to sit down with the farmer-customer and point out that although cutting out fertilizer in next year's plans cuts down expenditure, it also cuts down production. Soil efficiency goes down and down with it goes his gross income.

The farmer who gets the best yields and the most from his fertilizer dollar is the one who uses the proper quantity and analysis fertilizer; proper

(Continued on page 16)

Farming is a highly competitive business. Without skill and good management, security on a farm is an illusion.

Education, is no guarantee of success in farming. Its importance is often underemphasized by those who do not have it, and overemphasized by those who do. Farming is steadily becoming more of a complex science.

The successful farmer has to be abreast of that which is new and better in crop production and in livestock production . . . has to be willing to accept new ideas. Education helps him make these adjustments and on the average make the most money.

Experience is definitely needed and education is not a substitute for it. Getting farm experience takes time . . . its a growth. Reading a book will never teach a person how to milk a cow, but a good bulletin on feeding cows will be a great deal of help.

The trouble with experience is, "One farmer just don't get enough of it." If he could spend ten or more years visiting other good farmers, as well as several experiment stations, finding out from them direct, "What succeeds and what fails" . . . well: that really would be experience.

Enviroment means much. Are your neighbors really good farmers? Do the dealers know the answers well enough to advise? What does the community think? Leaders should not fight progress. Tradition can be the enemy of progress, sometimes. Changes are coming and coming fast. Are your farmers willing to meet these changes?

SWEET POTATO LOSS

CLEMSON, S.C. — Various estimates place the quantity of sweet potatoes lost in storage at 40%, according to Hugh A. Bowers, Clemson extension truck crop specialist, and W. C. Nettles, leader, Clemson Extension Entomology and Plant Disease Work. They say this is the highest pest-loss figure for any South Carolina enterprise.

DOING IS BELIEVING

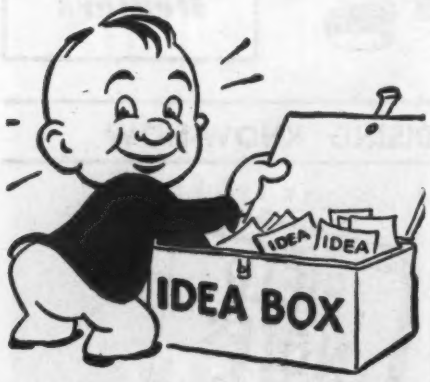
MEMPHIS—Fertilizing pays off.

Clifford Dumas of near Eldorado in Union County, Ark., produced 4½ tons of common Bermuda hay per acre on a five-acre plot this year by fertilizing according to soil test recommendations and using sprinkler irrigation.

At Ashport, Tenn., Clifford Sweat recently harvested 35 acres of corn on which he used 90 lb. nitrogen per acre from anhydrous ammonia for a yield of 133 bu. to the acre.

Better Selling

Richer Sales Fields for Dealers



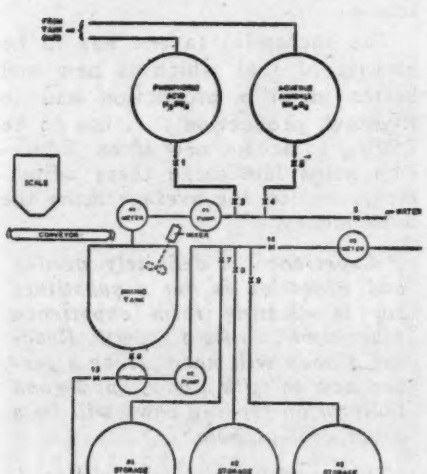
What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6338—Liquid Fertilizer Production

Literature containing operating instructions for liquid fertilizer production has been prepared by the Standard Steel Manufacturing Co., Inc. The types of raw materials are listed, together with operating details. A large schematic drawing of a plant, similar to the one pictured here, is included with the instructions. The literature notes that "these instructions will help you operate your plant easily and efficiently. They are designed to help you make the most fertilizer for every dollar you pay for raw materials . . ." Secure the literature by checking No. 6338 on the coupon and mailing it to Croplife.



No. 6339—Insecticide

A detailed description of methyl parathion, an organic phosphate insecticide recommended for the control of aphids and spider mites on cotton, is contained in a new technical bulletin published by Monsanto Chemical Company's Organic Chemicals Division. Company officials stated that "methyl parathion, like parathion (Monsanto's Niran), is non-translocating when applied to foliage. It has proved more effective than parathion against cotton boll weevil and is included in the official recommendation for cotton insect control. Experiments now in progress indicate good potentials for the compound against aphids on grapes, aphids and weevils on alfalfa, and several other pests including beetles, caterpillars and mosquito larvae. Combinations of methyl parathion and parathion are registered for use in California on a variety of horticultural crops. The two compounds are very similar although a higher volatility is indicated for methyl parathion, imparting better fumigant properties to a spray." Secure the bulletin, 0-55, by checking No. 6339 on the coupon and mailing it to Croplife.

No. 6340—Applicator

Schelm Brothers, Inc., is now manufacturing and distributing a nitrogen solution applicator designed by W. A. Senesac. Called by the trade name, Senesac-Schelm "do it yourself" applicator, the unit comes equipped with a 100-in. tool bar and four knives. Tool bar extensions and extra knives are available to give 160-in. row coverage with any desired knife spacing. A spray boom is available to convert the unit into a trailer spray for applying non-pressure solutions or insect and weed chemicals. Controlled air pressure is supplied by a mounted compressor. Check No. 6340 on the coupon, clip and mail it to secure more information.

No. 6331—Stabilizer

No. 6332—Brochures

No. 6333—Field Speedometer

No. 6335—Vehicles For Toxicants

No. 6336—Applicator

No. 6337—Absorptive Bulking Agent

A new line of synthetic calcium silicates trade-named "Micro-Cel" has been announced by Johns-Manville Corp. The material has been proven as an absorbent-grinding aid for high liquid concentrate insecticide wettable powders and as an anti-caking

agent in fertilizers and insecticide dusts, according to the manufacturer. The makers say it will absorb one to 2½ times its weight of liquids and still remain a free-flowing powder. (See photo which shows a graduate of water being added to the product with the result that the product will still flow.) Bulk density ranges from five to 15 lb./cu. ft., according to grade. Fast, uniform blending without segregation is listed as one of the characteristics. The material is inert with a pH range of 8.0 to 10.0. For more details, check No. 6331 on the coupon and drop it in the mail.

No. 6332—Brochures

The Elsevier Press, Inc., has announced the availability of three brochures describing publications of technical interest. They are: 1. A 32-page brochure describing in detail Elsevier's Encyclopaedia of Organic Chemistry. The encyclopaedia, 13 volumes now published, is an exhaustive, comprehensive description of carbon compounds — their chemical, physical and chief physiological properties. 2. A 30-page catalogue of Elsevier's Scientific and Technical Publications. 3. An eight-page brochure describing Elsevier's Chemistry of Carbon Compounds series. Secure the brochures by checking No. 6332 on the coupon and mailing it to Croplife.

No. 6333—Field Speedometer

An all-purpose field speedometer is now being offered by the O. M. Kromer Co. The speedometer can be used to run on the ground or on a smooth tire. It comes complete with a drawbar hitch. The unit can be attached to all types of farm equipment and is claimed to give precise measurement in tenths and hundredths of a mile. It registers ground speeds from 0 to 10 m.p.h. and records miles up to 10,000 miles. More complete information may be secured by checking No. 6333 on the coupon and mailing it.

No. 6335—Vehicles For Toxicants

Literature concerning vehicles for agricultural toxicants has recently been prepared by the Soluble Products Co. The firm's line, known as Aquacels, is described as non-toxic powders, instantly soluble in cold water, always uniform and 100% effective. Effectiveness with seed protectants, insecticide sprays, wettable powders and dusts, nursery stock dip coatings and other agricultural toxicants is claimed. A bulletin which recommended Aquacels for use with various types of agricultural toxicants, together with the conclusions of a typical research laboratory report will be supplied without charge. Merely check No. 6335 on the coupon and drop it in the mail to Croplife.

No. 6336—Applicator

The Pollard Manufacturing Co. has developed a new anhydrous ammonia applicator called the "Nitrogen Prince." The company announcement states that the applicator has "a new and revolutionary design embodying a new application of weight transfer." The new applicator has two wearing surfaces which "make for low upkeep and fast power saving operation," it is claimed. An added feature is adjustable ground wheel spacing as well as adjustable knife spacing. Standard on this machine are 1¼" double coil spring shanks, fast hitch coupling and special alloyed and hardened knives. For further details check No. 6330 on the coupon and mail it to Croplife.

No. 6330—Spray Method

Developments in the Hose-Mizer spray guns and pellets for pest and plant disease control have been announced by their manufacturer, International Research Corp. The company's method of spraying uses a light-weight, unbreakable gun which attaches to an ordinary garden hose

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

Send me information on the items marked:

- ☐ No. 3798—Concrete Floors
- ☐ No. 5300—Display
- ☐ No. 5309—Accounts Receivable
- ☐ No. 6325—Soils Handbook
- ☐ No. 6326—Ammonia Converter
- ☐ No. 6327—Spray Catalog
- ☐ No. 6328—First Aid Kit
- ☐ No. 6329—Boom
- ☐ No. 6330—Spray Method
- ☐ No. 6331—Stabilizer
- ☐ No. 6332—Brochures
- ☐ No. 6333—Field Speedometer
- ☐ No. 6335—Toxicant Vehicles
- ☐ No. 6336—Applicator
- ☐ No. 6337—Absorbent Agent
- ☐ No. 6338—Production Literature
- ☐ No. 6339—Insecticide
- ☐ No. 6340—Applicator

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT — FOLD OVER ON THIS LINE — FASTEN (STAPLE, TAPE, GLUE) — MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

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Croplife

P. O. Box 67,

Reader Service Dept. Minneapolis 1, Minn.

rmal water pressure will send out ream 20 ft. or more, it is claimed. nozzle on the gun makes the aying action adjustable from a t to a stream for high shrubs and es. Chemicals which make a com- te spray formula are supplied in let form in fiber containers. The se-Mix't gun does the mixing. Pel- are poured into the mixing cham- Secure more details by checking 6330 on the coupon and mailing it.

o. 3798—Concrete loors

The Care and Maintenance of Con- te Floors" is the title of a 12-page oklet just released by the National nitary Supply Assn. The problems "dusting" and "blooming" are ex- ined and suggestions for overcom- them are outlined. Cleaning, fin- ing and daily maintenance tips are forth. The booklet is available thout charge and may be obtained checking No. 3798 on the coupon d dropping it in the mail.

o. 6325—Soils Handbook

The Davison Chemical Co., Division W. R. Grace & Co., has published a -page handbook on "Soils, Phos- ates and Fertilizers" by Vincent uchelli, the company's agronomist. deals with fertilizer chemistry in ymen's terms, and is addressed, in e author's words, to "salesmen, rmers, and laymen in general to ve in simple, understandable lan- age some essential, practical in- rmation on the feeding of soils and ops." Mr. Sauchelli discusses kinds soil, what soils contain moisture pply, water requirements of crops, ntrolling soil moisture, how plants ed, chemical fertilizers and soil fer- lity, plant constituents, plant nutri- nts, humus, commercial fertilizers d soil amendments, secondary and ace elements, using fertilizers, fer- lizer materials, phosphates and the elative value of phosphatic ferti- zers. Secure the handbook by check- g No. 6325 on the coupon and mail- g it to Croplife.

No. 6329—Boom

The John Blue Co. has available a ew boom for applying nitrogen solu- ions such as Solution 32. The new oom is 21 ft. wide and when used ith the Blue model "NSF" solution ump, up to 50 gallons of solution er acre may be applied. The com- any announcement states: "All solu- ion is carried by hose and all fittings nd orifices are constructed of non- orrosive materials. The orifices are paced every 12 in. to give even cover- ge and they are designed to give a traight uniform stream to reduce oliage burn when ammonium nitrate olutions are used. Where fan type ozzles are desired it is a quick and asy matter to install them on the oom as all threads are standard pipe ize." Boom attachments are avail- ble for several of the company's railer type applicators or the boom ay be obtained as a separate item or "custom mounting." To secure ore complete details check No. 6329 n the coupon and mail it.

No. 6328—First Aid Kit

Neutralize is the trade name of a roduct contained in a first aid kit repared by the E. D. Bullard Co. for se on persons who have come in irect contact with anhydrous or iquid ammonia. Company spokesmen aid: "Neutralize, a colorless, odor- ss liquid, will counteract the effects f ammonia immediately. It is es- ential only that the product be oured directly into the eyes or over he skin. It is packaged in 4-oz., un- reakable polyethylene. There are 4 bottles of Neutralize in each Bullard ammonia first aid kit. In addition there are 11 unit first aid packs in the kit, containing such things as gauze pads and absorbent compresses, scissors, eye dressing equipment, and Merthiolate, in the new Uni-Drop dispenser. Complete information for specific first aid treatment of ammonia victims is included in each metal kit." Secure more details by checking No. 6328 on the coupon and mailing it.

No. 5300—Display

The American Scientific Laboratories announces new packaging for its product, Banarat Bits. Each case of 12 1-lb. bags of this warfarin rat killer is now supplied in duplex shipping cartons. The carton is printed inside and out so as to become a merchandising unit when opened. It is convenient for counter or island display. Secure more complete details by checking No. 5300 on the coupon and dropping it in the mail.

No. 5309—Accounts Receivable

"Simplified accounts receivable for retailers" (SARR) is described in an 8-page folder released by Remington Rand. Based on the company's "simplified unit invoice accounting plan" (SUIAP), "simplified accounts receivable for retailers" uses no accounting machines and requires no highly trained clerks. It is claimed to provide a complete, accurate and fast method of handling accounts receivable. The method uses Remington Rand's Kolect-A-Matic trays, housed in Safe-Ledger equipment for 24-hour protection from fire, and provides an accounts receivable ledger composed of open, unpaid items only, a monthly statement for each customer, and a history of each account. Secure literature on this method by checking No. 5309 on the coupon and mailing it.

No. 6327—Spray Catalog

Catalog No. 30 has just been published by Spraying Systems Co. It covers spray nozzles and accessories for all types of farm, ranch, orchard and garden spraying. The 20-page catalog includes illustrations, description and spraying data on all types of nozzles for boom spraying, broadcast spraying, hand spraying and air-

(Continued on page 16)

YOU Increase

When You Sell

Lion Nitrogen Fertilizers

Because The LION Brand Is Pre-Sold

HERE'S THE LION LINE-UP OF QUALITY NITROGEN FERTILIZER MATERIALS

Lion Anhydrous Ammonia—82.2% nitrogen. Quality guaranteed.

Lion Aqua Ammonia—Ammonia content about 30%—other grades to suit your requirements.

Lion Ammonium Nitrate Fertilizer—Improved spherical pellets. Guaranteed 33.5% nitrogen.

Lion Nitrogen Fertilizer Solutions—Various types to suit your particular manufacturing needs.

Lion Sulphate of Ammonia—White, uniform, free flowing crystals. Guaranteed 21% nitrogen.

Retailers who market Lion nitrogen fertilizers are enjoying sales increases and expanding profits, because the Lion brand is being continuously *pre-sold* to farmers—and retailers reap the benefits.

Throughout the year, Lion advertising appears in leading state farm publications, and in Farm & Ranch-Southern Agriculturist, Prairie Farmer, Progressive Farmer, and Wallaces' Farmer & Iowa Homestead. These advertisements tell farmers—again and again—the *facts* about plant foods: that the farmer who uses the proper kinds and amounts of commercial fertilizers will increase his yields and his profits. This advertising sells fertilizers, for Lion and for *you!*

Lion's two giant chemical plants have the capacity to assure you a steady supply of the most popular and economical types of nitrogen fertilizers. In fact, Lion is the world's largest manufacturer of prilled ammonium nitrate, and one of the industry's leaders in producing other nitrogen fertilizer materials.

It's easy to sell nitrogen fertilizers with the Lion emblem on the bag, or Lion's anhydrous ammonia. And easier selling adds up to *more profits for you.*

DISTRICT SALES OFFICES: NATIONAL BANK OF COMMERCE BUILDING, New Orleans, La. • SHEPHERD BUILDING, Montgomery, Ala.

LION OIL COMPANY

A DIVISION OF MONSANTO CHEMICAL COMPANY

EL DORADO, ARKANSAS

We are telling 3½ million farmers

Fertilizer Grows Farm Profits

The farmer is in a cost-price squeeze today. He is faced with acreage restrictions, lower prices for crops he sells and higher costs for things he has to buy.

Fertilizers are vital to farm profits, because fertilizers produce big extra yields from smaller acreages, thus assuring a greater return from land, labor, machinery and other fixed expenses.

The importance of fertilizers in the present situation should be brought strongly to the attention of the farmer. Nitrogen Division, Allied Chemical & Dye Corporation, is doing something about it!

The advertisement shown on the opposite page is the opening gun in a powerful and continuing campaign directed to the attention of more than 3½ MILLION readers of farm magazines.

This campaign will serve the best interests of the farmer, the fertilizer manufacturer, the county agent, the country banker, the experiment station, the extension service and all others interested in a profitable agriculture.

"This year I'm using
ore than ever before!"

**EAR many of the best farmers are using more fertil-
ever before. With farming costs going up and farm
ning down, they want the extra yields of high-quality
fertilizer adds to every acre at such low extra cost.**

ourself. Your investment in
chinery, insect control and
is the same whether your
. When you double or triple
e use of more fertilizer, you
es as much crop income to
nses. Your only extra costs
rtilizer and harvesting the
yields added by fertilizer are
ost profitable share of your
ter shape to make a good
prices, acreage restrictions
eyond your control.

r example, do you know how
re you have to produce to
In one state the break-even
r acre. In another state it
bushels per acre depending
d. If your break-even point
r yield is 35 bushels, you've
ou use enough fertilizer to

increase your yield to 100 bushels per acre, you make a big profit.

First consideration should be given to the important economic fact that a bushel or a pound of any crop can be produced much more economically when the yield is high than when the yield is low. The yield per acre bears a positive relation to the cost of production and the yield is dependent on the fertility of the soil.

Fertilizer is your best investment. The price of fertilizer has not gone up like the prices of many other things the farmer buys. Fertilizer grows farm profits. Returns from thousands of tests show that $1 invested in fertilizer produces an average return of $3.75 in extra yields. On many crops the return is much higher. Put more fertilizer to work for you. It's your best answer to the present farm situation.

The fertilizer industry serves the farmer. Nitrogen Division serves the fertilizer industry as America's leading supplier of nitrogen for use in mixed fertilizers.

See Your County Agent

Ask your County Agent to recommend the analyses and the amounts of fertilizers best suited to produce big yields of the crops you grow on your soil. His advice to you is based on the latest official recommendations from your Extension Service and Experiment Station.

See Your Banker

Bankers are alert to good investments. They know that fertilizer pays a big return in the short period of a growing season. If you need money to buy more fertilizer, most bankers consider the extra yields produced by fertilizer as an excellent risk.

See Your Dealer

Your fertilizer dealer can supply you with a good brand of fertilizer in the amounts and analyses as recommended by your County Agent. Help your dealer to get your fertilizer to you on time by placing your order early and accepting prompt delivery. Use more fertilizer than ever before and have it on hand when you need it. Remember, fertilizer grows farm profits. Use enough to really pay you big!

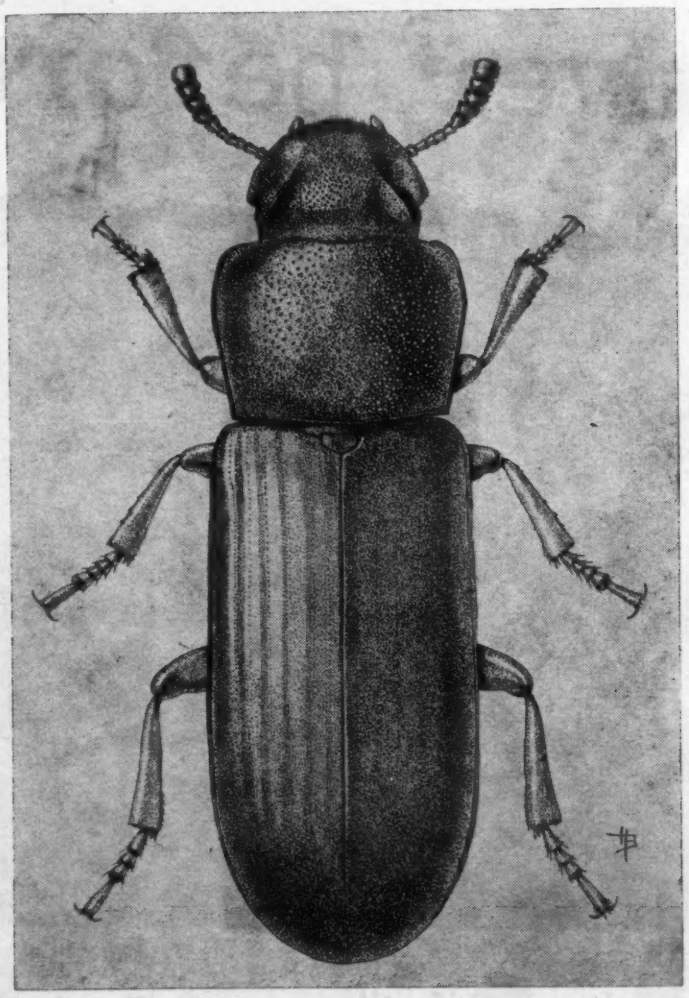
NITROGEN DIVISION ALLIED CHEMICAL

NITROGEN DIVISION Allied Chemical & Dye Corporation
New York 6, N. Y. • Hopewell, Va. • Ironton, Ohio
Omaha 7, Neb. • Indianapolis 20, Ind. • Columbia 1, S. C.
Atlanta 3, Ga. • Kalamazoo, Mich. • Columbia, Mo.

Fertilizer Grows Farm Profits

BUG OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board



Confused Flour Beetle

How to Identify

The confused flour beetle is very similar in appearance to the red flour beetle, but is more abundant, particularly in the northern part of the U.S. The adult (shown here) is approximately 1/7th inch long. Larvae are brownish, somewhat flattened, six-legged and worm-like creatures. Flour millers often refer to the latter as "bran bugs" because of the presence of this pest in all kinds of wheat and grain.

Habits of the Flour Beetle

In from five to twelve days after eggs are laid, small, brownish-white worms are hatched, which become full-grown in from two to four months. The variation of time depends upon the prevailing temperature and the type of food available for them to eat. These worms turn to white pupae and remain in this stage for several weeks. When adults, they are very active bugs, able to run swiftly when disturbed. The female is quite prolific, being capable of producing some 1,000 eggs during the two years she may survive if the winters are relatively moderate. (These eggs are laid in cracks in the building or directly on the food material . . . they hatch in less than two weeks.)

Damage Done by the Beetle

Flour beetles are said to devour at least their own weight of food each week, and their larvae destroy many times their own weight of food while they are developing. Since the beetle feeds on many varieties of grain, flour, starchy materials such as beans and peas, the damage they do is considerable. This particular bug has been known in the U.S. since 1893 and the economic loss it has caused since that time would be difficult to calculate. The beetle, being one of the most common occurring where grain products are stored, has the opportunity to do great damage. Its name, incidentally, refers to the bug's anatomical makeup, not to any allusion to its being a "mixed up" insect.

Control of Flour Beetle

Both corrective and preventive methods of control are available through various fumigants and non-toxic insecticides. Specific information on control of these beetles is available through state experiment stations and county agents.

Illustration of confused flour beetle furnished Croplife through courtesy of U.S. Department of Agriculture.

Previous "Bug of the Week' features are being reprinted in attractive 24-page booklet, priced at 25¢ single copies; reduced rates in quantities. Write Croplife Reprint Dept., Box 67, Minneapolis 1, Minn.

FARM SERVICE DATA
Extension Station Reports

inter grazing crops require fer-
ation, according to W. R. Thomp-
Mississippi extension pasture
alist.

r clover, vetch or winter peas for
ing he recommends 200 lb. 20%
phate and 50 to 100 lb. muriate
otash, or 500 lb. of basic slag
the potash.

r cereals, the specialist says that
o 60 lb. nitrogen per acre under
crop will give good grazing. For
eralized land to be sod seeded,
uggests 40 to 60 lb. nitrogen. If
land has not been mineralized.
lb. of a good mixed fertilizer
ld give good results.

★

outhwest Louisiana farmers can
duce more rice and beef on fewer
s and at less cost through a
em of improved pastures used in
tion with rice, the Louisiana
te University Agricultural Experi-
nt Station reports in a recently
lished bulletin.

Written by David E. Black and
K. Walker of the Rice Experiment
tion at Crowley, the bulletin de-
bes rice-pasture rotation experi-
nts they conducted at five South-
t Louisiana locations from 1946
1953.

The researchers reported an in-
ase of over six barrels of rice per
e from the first year's planting
lowing three years of improved
ture. The increase in the second
r was about three and a half
rels per acre.

**Average beef production from the
proved pasture was 271 lb. per
re as compared to 46 lb. per acre
om unimproved pasture.**

Discussing results of the experi-
nts, Mr. Black and Mr. Walker
:

"It is quite evident that a long-
e rotation of improved pasture
d rice is superior to the most com-
n rotation of one year in rice fol-
ed by one year of native pasture
generally practiced in Southwest
uisiana.

★

Lice on beef cattle can be con-
lled by thorough spraying in the
l and repeating in late winter or
rly spring, according to Dr. J. O.
well, entomologist at Virginia Poly-
chnic Institute. He says either of
ese formulas will make a satisfac-
y spray: one lb. 25% lindane per
0 gal. water or 8 lb. 50% DDT wet-
ble power per 100 gal. water.

★

Tests during the last two years at
e North Mississippi Branch Station,
olly Springs, have shown that the
ficiency of phosphate for the pro-
uction of winter grazing from wheat
greatly increased when the phos-
ate is applied in contact with the
ed at seeding time. The phosphate
rtilizer does no damage to the
heat seedling. Quite the contrary,
n phosphate deficient soils, it stim-
ates fast, early growth of the
heat, producing earlier grazing.

★

Flue-cured tobacco that received
00 lb. 3-9-9 fertilizer in initial fer-
lization and one side-dressing, and
00 lb. at a second side-dressing, had
e highest yield in seven test plots,
ys Leonard Cobb, Gilchrist County,
la., agent.

The experiment was conducted for
e University of Florida soils de-
partment, Mr. Cobb said. Corn and peanuts also were tested but results are not yet available.

The top plot produced 2,526 lb. tobacco, Mr. Cobb said, with 124 lb. green and 479 lb. trash.

Second highest yielding plot had 2,217 lb., with 62 lb. green and 169 lb. trash. This plot got 600 lb. 3-9-9 fertilizer initially, one side-dressing and an application of 75 lb. per acre of potassium sulphate.

Third high plot yielded 1,922 lb., 93 lb. of green and 155 lb. of trash. It got 600 lb. 3-9-9 fertilizer initially, one similar side-dressing, and 225 lb. 8-0-24, plus 113 lb. per acre of potassium sulphate.

Yields of the other four plots, with varying fertilizer amounts, ranged from 1,860 lb. total yield to 1,535 lb.

New Jersey Hurricane Loss Reaches $773,200

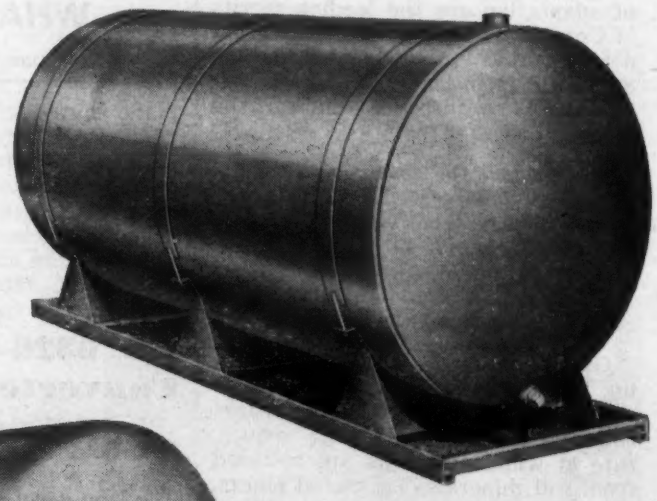
NEW BRUNSWICK — Hurricane Diane cost New Jersey farmers $773,200. This represents losses in crops and livestock due to flooding, plus sedimentation damage to land from gullying and sedimentation debris, and impairment of roads and drainage ditches, according to Frank C. Edminster, state conservationist with the Soil Conservation Service, U.S. Department of Agriculture.

Total land damaged by flooding was 2,975 acres, Mr. Edminster's report shows. Of this, 1,767 acres were in crops and 1,208 in pasture. Sedimentation damaged 232 acres of farm fields and 23,400 feet of channels.

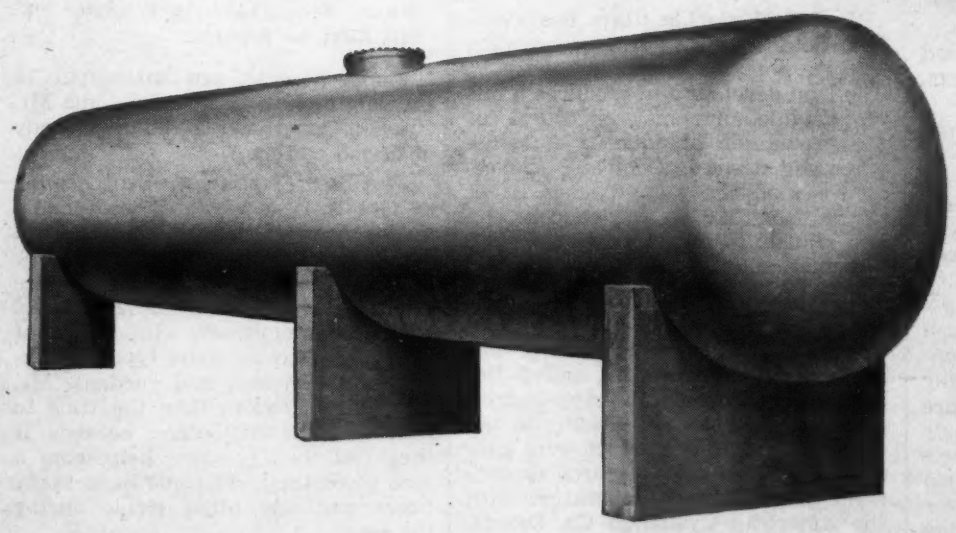
SOIL TEST RECORD

BLACKSBURG, VA. — A record total of 49,720 soil tests were made by the Virginia Polytechnic Institute agronomy department between July 1, 1954, and July 1 of this year, according to W. W. Lewis, agronomist. Of that number, 18,803 tests were made for the Agricultural Stabilization Conservation state committee.

Welded Aluminum– *best tank for liquid nitrogen*



3 sizes of skid tanks for transport. 5 sizes of farm tanks.



Bulk storage in 12,000 and 22,000-gal. capacities.

BUTLER *best source for aluminum tanks... all popular sizes!*

Not just any aluminum tanks—they're Butler! Get top quality low-pressure tanks—built and tested by Butler tank specialists—guaranteed by Butler. Each tank is engineered with superior strength in stress areas. And Butler supplies the sizes of low-pressure tanks your business needs. Bulk storage tanks in 12,000 and 22,000-gal. sizes. Skid tanks for transport in 500, 830, and 1000-gal. sizes. Rugged detachable skids have rubber lined straps to protect metal. Farm storage tanks are available in 100, 270, 500, 830, and 1000-gallon sizes. Mail coupon to Butler now for complete information.

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BUTLER MANUFACTURING COMPANY
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996A Sixth Avenue S.E., Minneapolis 14, Minnesota
1014 Avenue W, Ensley, Birmingham 8, Alabama
Dept. 96A, Richmond, California

Send me more information on the following sizes of Butler low-pressure aluminum tanks.

Name .....
Firm .....
Address .....
City ..... Zone ..... State .....

Fertilizing Coastal Bermuda Grass Proves Profitable in USDA-Georgia Station Tests

WASHINGTON — Southeastern farmers needing extra grazing can supply it at a profit by timely, heavy fertilization of their Coastal-Bermuda pastures, the U.S. Department of Agriculture reports.

Results of cooperative 13-year investigations by USDA and the Georgia Coastal Plain Experiment Station show that high Coastal-Bermuda production can be maintained over a period of years with adequate fertilization.

High yielding ability, disease and drouth resistance and a wide range of adaptation are the leading merits of Coastal Bermuda-grass. This grass demonstrated its dependability to Southern farmers in 1954, when it continued to produce during the drouth, USDA says.

In most of the southeastern U.S. where Coastal Bermuda is being planted, soil fertility is generally the main factor limiting growth. Sufficient nitrogen for maximum growth is not available in the soil at most locations.

Other factors involved in determining the kind and amount of fertilizer that will pay include temperature, rainfall, length of growing season, rate at which nutrients are released from soil minerals, associated plants, soil management, and grass yield.

A study of the problems associated with efficient nitrogen fertilization of Coastal Bermuda-grass has been made at Tifton, Ga., by geneticist Glenn W. Burton, jointly employed by USDA's Agricultural Research Service and the Georgia Plain Experiment Station.

Dr. Burton found that increased yields, succulence and protein content can be obtained by splitting nitrogen applications when moisture is plentiful in the spring and early summer, rather than making a single spring application of nitrate of soda or ammonium nitrate. Some fertilizer should be applied early in the spring for early production and maximum yields, he reports. Efficient use of moisture, usually well supplied at this season, can be very important. A second application should be made before dry weather sets in.

At Tifton, Coastal Bermuda fertilized in early March with 100 lb. N and 500 lb. 0-10-20 per acre has produced more than 2 tons of hay per acre by the latter part of May —several times more than unfertilized or May-fertilized grass. Annual yields were increased from 1 ton per acre with no nitrogen to 8 tons per acre where 400 lb. N were applied annually.

The 100-lb. rate of N gave the greatest yield of hay per pound of N, whereas the 200- and 400-lb. rates produced the most protein per pound of N.

Due to a number of fixed costs, the cheapest hay at current prices was produced by applying 200 lb. N per acre. The cheapest protein was obtained by applying 400 lb. N per acre. The percentage of the nitrogen recovered in the hay was unusually large, indicating that Coastal Bermuda-grass is very efficient in its use of this element.

Grazing studies conducted at the Georgia Coastal Plain Experiment Station indicate that Coastal Bermuda will produce approximately 275 lb. beef per acre with an annual application of 36 lb. N per acre.

This fertilization maintained a reasonably good sod, but it is believed to be close to the minimum that should be used for sustained production where Coastal Bermuda is grown without a legume.

As knowledge of this forage plant spreads, Dr. Burton says, acreage of Coastal Bermuda-grass in the South will undoubtedly increase. Net returns from this grass, as his research shows, will be proportional to the efficiency with which it is fertilized and managed.

WHAT'S NEW

(Continued from page 11)

plane spraying. Information on accessory equipment is also included, such as adjustable valves, strainers and spray guns. Included in the catalog are tables for calculating field coverage of chemicals in terms of gallons pe racre and gallons per minute. Secure the catalog by checking No. 6327 on the coupon and mailing it.

No. 6326—Ammonia Converter

The J. C. Carlile Corp. has available detailed information concerning its new portable ammonia converter. The firm develops and produces a line of portable ammonia converters for the production of aqueous ammonia wherever desired. Company spokesmen say efficiency approaches 100%. Check No. 6326 on the coupon, clip and mail it to secure more complete information.

No. 6331—Stabilizer

The Velsicol Chemical Corp. has available a new product called Deactivator "E" for stabilizing endrin-parathion dusts. Tests leading to the production of this product were conducted by Velsicol's research department working in collaboration with the American Cyanamid Co. Deactivator "E" is recommended only for use in endrin-parathion blends; it is not intended for use with endrin alone, the company states. The deactivator should be used only with those carriers and diluents that have been tested and found satisfactory by Velsicol chemists. A list of the carriers and diluents, together with formulation details, is available in bulletin No. 509-2 titled: "Suggested Formulations For Endrin-Parathion Dusts." Secure it by checking No. 6331 on the coupon and mailing it.

California Scientist Studying Nematode

BERKELEY, CAL.—The chemical control of a burrowing nematode is the subject of a study now being conducted by Dewey J. Raski, chairman of the department of plant nematology at the University of California.

Dr. Raski is spending the next six months in Florida working with the Florida State Plant Board on a burrowing nematode, a microscopic, soil infesting roundworm that attacks citrus, avocados, and many ornamentals. He will participate in chemical control studies to kill the pests in nursery bed soils.

According to surveys in California, the burrowing nematode is still rare in the Pacific Coast state, but as it is damaging to citrus, avocados, and ornamentals in Florida it could also be a threat in California and to the same crops raised in the west, Dr. Raski said.

Special Attention to Small Gardeners, Homeowners Pays Off for Florida Deale

By AL. P. NELSON
Croplife Special Writer

One way to get the fertilizer and insecticide story direct to a large number of prospects at one time is to talk to a garden club, where from 25 to 50 persons attend at one time.

Ted Cyzycki, who is partner in Gray's Feed & Seed Co., Ormond Beach, Fla., with Richard Gray, gives from six to ten talks per year at various garden and flower clubs in the area, and he states that this is a very good way to publicize the business and to make contacts with prospects.

This man is well qualified to give such talks for he is a graduate of the College of Agriculture, University of Florida, and he konws soils and growing conditions in Florida. His partner, Richard Gray, handles the feed end of the business, especially outside calls, while Mr. Cyzycki supervises most of the fertilizer and insecticides promotional work.

He reports that at most of these talks he speaks about subjects such as sprays, fertilizer, seeds, soil conditions, insecticides, fungicides, garden equipment. When a new product is introduced on the market he frequently details its use. Gardeners are glad to get advice of this kind, he reports.

Many persons are interested in growing orchids in this area, and Mr. Cyzycki has made a detailed study of orchid culture.

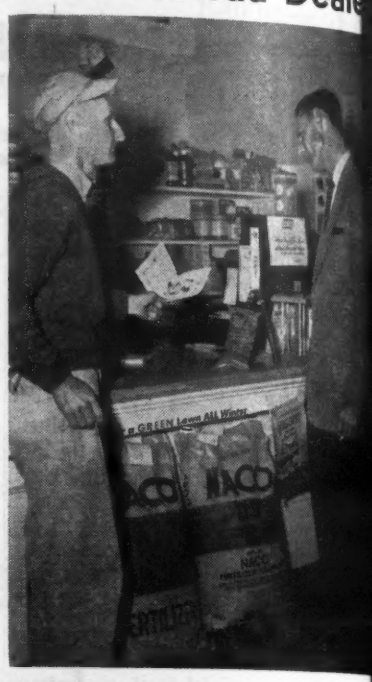
Fertilizer gets an excellent display at Gray's Feed & Seed, with many of the bags of various brands lined up against the main serving counter so that prospects can't fail to see them. Quite a few of the customers here are home owners who need a lot of explanation on some types of fertilizers for homes and gardens. Mr. Cyzycki is glad to take the time to talk to such customers, because if they feel they get real help from a seed store they will come back many times and buy other items during the year.

"The average Florida family spends a lot of time outdoors, due to the long season, and the volume of business each can bring into a store annually is really considerable," points out Mr. Cyzycki.

Outside the store, these dealers have a wire enclosed area in which they display many potted plants, flowers and vegetables, many months of the growing season. There is a wire gate for this display area, which means that the merchandise need not be brought inside every day. This wire enclosure saves labor and time, and it also has a definite display value, for the items can easily be seen through the wire by street traffic.

Mr. Cyzycki and Mr. Gray have some fine display shelves and islands in their store and give plant foods, insecticides, fungicides, sprayers, etc., an excellent showing. They encourage browsing and find that gardeners and homeowners who are given this privilege often purchase many additional items.

"In a warm climate like this, one should not discount the business he can get from the homeowner and small gardener," states Mr. Cyzycki. "There are so many of them, you see, and their total purchasing power in fertilizers and related products is terrific. We make every effort to win the trade of these people through service, educational work and newspaper advertising."



FLORIDA DEALER — Ted Cyzyc partner in Gray's Feed & Seed C Ormond Beach, Fla., is shown at t left explaining a fertilizer to a hom owner. This store pays special a tention to the needs of the hom owner and small gardener. With pro er attention and promotion, this ty of business can be built up to a go volume, Mr. Cyzycki says.

OVER THE COUNTER

(Continued from page 9)

liming practices; high quality see sound crop rotation; good cultur practices; insect and weed contr and good management. Eliminati one or more of these steps spe lower yields and lower income ne year. Saving on the fertilizer doll is false economy.

Helping the Farmer

Dealers in farm chemicals and su plies are among those who bene most from civic undertakings whi make for better agriculture. Helpi the farm community become mo prosperous benefits the dealer b cause in turn he gets more busine

It is interesting to note the vari community projects which have t backing and cooperation of farm su ply dealers, and in many cases, t active leadership of the town's lea ing fertilizer and farm chemica dealer.

Promoting New Crops

To promote improved methods crop production and to stimulate i terest in new crops as an addition source of farm income in Hinds Cou ty, the agriculture committee of t Jackson, Miss., Chamber of Com merce sponsored two contests. O was for corn raising and the oth for sweet potatoes. Prizes totali $100 in each class were distribute

Farmers' Night School

When a lot of farmers signed u for a 10 weeks' night school course agriculture at one high school, me chants put on free refreshments f them every night they attend school. This helped to swell atten ance and to promote better relatio between farmers and businessmen.

GEORGIA PASTURES

ATHENS, GA. — Pastures occu more land in Georgia today than a other crop. One third of Georgia open land is grazed with more th 3 million acres in permanent pasture Another 1 million acres are used f winter grazing.

se of Radioisotopes in Farm Research iscussed at Tracerlab Symposium

OSTON—Several phases of radio-ope usage in research, develop-t and process control were dis-ed at Tracerlab Inc.'s second posium on Applications of Radio-ivity in the Food and Food proces-Industries. The three-day sym-um was held here Oct. 19-21 at Sheraton Plaza Hotel.

Included in the program were pers on the use of isotopes in dying action of fungicides, resi-e studies with two new herbi-les and screw-worm eradication rough release of sterilized flies.

awrence P. Miller, Boyce Thomp-Institute for Plant Research, Inc., nkers, N.Y., reported that rates of ake by fungus spores and ED50 ues for sulfur, mercury, silver, ium, ferric dimethyldithiocarba-te, 2-hepta-decyl-2-imidazoline and dichloro-1,4-naphthoquinone have n determined with the aid of iso-es. Quantitative studies on the in-action between fungus spores and ious toxicants were almost non-stent before the availability of dioisotopes, he said. The same is e on data on the quantities re-red per unit weight of spores to vent germination.

Accumulation of the mentioned terials by spores, with exception sulfur, was described as very rapid d in large amounts from dilute utions. Mr. Miller said sulfur was t accumulated but reduced to drogen sulfide and released.

Toxicants studied were found to ve ED50 values ranging from 85 10,000 micrograms per gram of re weight. Thes quantities were nerally taken up in a minute or s from solutions containing only to 10 ppm, Mr. Miller said.

Isotopic studies also included in-ence of toxicants on each other. periments on rate of uptake or bsequent release were said to have en information on competition or k of competition for the same re-otor sites. Some ions promoted up-ke of other ions if applied previous-or simultaneously. Probable chemi-l transformations in spores were icated through studies on rates d degree of exchange on addition further quantities of non-radio-tive toxicants, according to Mr. ller.

Labeled compounds, he said, have o been used in determining rela-e volatility of some 2,4-D esters. mparative volatility of the 2-ethoxyethoxy) propyl, 2-ethylhexyl d methyl esters was found to be 3 and 1 respectively.

Resistance of corn to two new e-emergent herbicides was report-by Ernest G. Jaworski, Monsanto emical Co., St. Louis. Resistance corn to a-chloro-N,N-diallylaceta-de and 2-chloroallyl-N,N-diethyl hiocarbamate probably results m its ability to metabolize them idly, he said.

Analyses of acetone extracts of ture corn kernels indicated that residue of either herbicide was sent. Mr. Jaworski said no ace-ne soluble radioactive extractives re found.

Paper chromatographic studies of etone extracts from young corn nts grown in the presence of high els of radioactive compounds indi-ted a very rapid breakdown of the rbicides, he said. Seven radioactive t non-phytotoxic compounds were rmed in a matter of days following emical treatment of the corn.

The tracer technique was adopted these residue studies, Mr. Jawor-i said, since extremely low resi-es, if any, were anticipated.

Studies are now under way on mass aring and sterilizing of screw-rms by irradiation with the object-e of developing procedures for dicating the livestock pest from e southeastern U.S. This was re-vealed by R. C. Bushland, Agriculture Research Service, U.S. Department of Agriculture, Kerrville, Texas.

If the screw-worm population could be eradicated, Southeastern livestock producers would be saved millions of dollars annually, he said.

Effective sterilization of screw-worms was done by irradiating pupae with 5,000 r of gamma rays from cobalt 60. Mr. Bushland said that if a female mates with a sterilized male, she will not mate subsequently and will lay only infertile eggs.

The impact of atomic energy on biology and agriculture was outlined by Dr. Paul B. Pearson, chief of biology branch, Atomic Energy Commission. Dr. Pearson spoke at the banquet session on Oct. 19.

V-C Seeks Court Judgment Against Diamond Alkali Co.

RICHMOND, VA. — Virginia-Carolina Chemical Corp. has filed a complaint in Federal District Court here, seeking to obtain a $430,000 judgment against Diamond Alkali Co. and the Diamond Black Leaf Co. V-C asserts that this amount is the balance due for pesticidal chemical inventories which were transferred from V-C to Diamond early in the year. Diamond had formed a new company, the Diamond Black Leaf Co., and the inventory had been transferred in accordance with an agreement.

V-C says that the product inventories transferred to Diamond Black Leaf on February 28 had a value of $3,524,961. However, V-C states that since the transfer, its bookkeeping and accounting procedures have been questioned by the defendants and that the entire sum due the Richmond firm has not been paid. This figure is set at $432,718. V-C is also seeking 6% interest on this amount.

In a telephone interview with Diamond Alkali Co. officials in Cleveland on Nov. 2, the company said that it had no statement to make at this time. The court has allowed Diamond 20 days from the date in which the complaint is served, to make reply to the charges.

ICA Fertilizer Awards Listed for Vietnam

WASHINGTON — A list of awards for the supply of goods to Vietnam issued by the Office of Small Business, International Cooperation Administration, covering the period Aug. 1 to Sept. 7, shows that the supply of fertilizers of a total value of $12,582 has been financed by the U.S. government.

The fertilizers are to be imported from France by the firm of Ste Indochinoise de Potasse, Saigon.

These progress pictures, made in August, show portions of Escambia Bay Chemical Corporation's nitrogen plant now nearing completion at Pensacola, Florida
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Nitrogen materials for agriculture and industry will be available from the Escambia Plant which will provide complete nitrogen production for the Southeast. Products will include anhydrous ammonia, ammonium nitrate, nitrogen solutions and nitric acid.
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WORLD REPORT

By GEORGE E. SWARBRECK
Croplife Canadian and Overseas Editor

The potash industry of Western Germany estimates its output this year at 1.7 million tons, an increase of less than 4% over last year's level. Production in 1954 exceeded that of 1953 by 296,000 tons, or 25%. European importers of potash were confident that the Germans would aim at beating that record.

However, the failure to do this was purely voluntary on the part of the mine owners. Extra production would have meant incurring heavy overtime payments and the postponement of urgent repairs to equipment. The additional output would not have shown a similar compensation in the financial statements, they say.

Exports this year will probably amount to 700,000 tons, against 643,000 tons last year. The 1955 figure is 50% more than the export total for the whole of Germany in 1938.

The potash firms are now starting on the large scale marketing of complex fertilizers. German farmers have been reluctant to use them in the past, but in view of the prevalent labor shortage potash-nitrogen-phosphate mixtures are achieving some popularity. Three of Germany's potash groups have gone into partnership with nitrogen producers to take advantage of the improved market.

The domestic production, however, will have to meet some stiff competition from imports. Norwegian nitrogen is cheaper than the German product, while British and Austrian nitrogen prices compare favorably.

Potash Prospects

The Germans are happy with the long term prospects for potash. The Organization for European Economic Cooperation reports that world consumption has risen by 50% during the past 20 years from 4 million to 6 million tons, and foresees a further steady annual rise of 4%. Western Germany is the second largest exporter and the second largest producer of potash in the world.

Japan is the largest importer—with an offtake of 376,000 tons in 1954. Next in line are Britain, the Netherlands and Denmark, with 284,000 tons, 174,000 tons and 140,000 tons.

The German potash industry was once tainted with cartelism. Its operations aroused considerable criticism in various parts of the world. There is little chance of a revival of the cartel system, but there is close scientific cooperation through the International Potash Institute at Bern, Switzerland.

Duty Lifted

Nicaragua has relaxed duties on imported fertilizers. Now allowed to enter duty-free are natural fertilizers of animal or vegetable origin not chemically treated, Chilean nitrate, natural phosphates, ground or unground, and crude potash salts.

The exemptions will remain effective until the National Council of Economy declares that local industry can produce economically and in sufficient quantities all or some of the fertilizers. Once such a declaration is made any fertilizer concerned will become subject to a duty of 100% ad valorem, the calculation of duty to be based on its c.i.f. value.

Australian Plant

Australia's largest sulfuric acid plant, situated at Port Adelaide, is now in operation. The plant, which cost the equivalent of $8,400,000 will go a long way towards meeting the requirement for superphosphate.

The plant will produce 100,000 tons of acid a year, sufficient to manufacture 300,000 tons of superphosphate. The plant is being operated by Superphuric Acid, Ltd., on behalf of Cresco Fertilizers, Ltd., and Adelaide Chemical & Fertilizer, Ltd.

Imports and Exports

The Yugoslavian government is making provision for the importation of 390,000 tons of fertilizers during 1956. Local sources are expected to provide a further 260,000 tons.

Fertilizer usage in Yugoslavia is increasing because the government is anxious to raise agricultural production.

The trade agreement between France and Chile has been modified to include the additional sale to France of 120,000 tons of Chilean nitrate and 9,000 tons of copper.

Venezuela may be able to cut its requirements of imported sulfur when a new plant, now under construction, comes into operation. It is expected to produce 200,000 tons a year. In 1954 1,363,100 metric tons were imported, most of it being used for the production of sulfuric acid.

Fertilizer for Turkey

The International Cooperation Administration announces that Turkey is to utilize $20,000 for the purchase of fertilizer.

Half the amount is to be spent on fertilizer containing N and P_2O_5 in the rates of 1-3-0. The fertilizer at this rate should contain 13% N and 13% P_2O_5. The balance of the money will be used for fertilizer containing N and P_2O_5 and K_2O at the rate of 1-1-1. The fertilizer at this rate should contain 13% N, 13% P_2O_5, and 13% K_2O.

The nitrogen content of both fertilizers should be in the form of ammonium. Nitrogen in the compound should be amalgamated with the other elements chemically and not physically. Both fertilizers are to be in granulated form.

The buyer is Zirai Donatim Kurumu, Ankara. Purchases may or may not be made in the U.S.

Another ICA announcement gives details of pesticides required by Pakistan, amounting in separate lots, to a total of 44 short tons. Also included are 1,000 gal. 2,4-D and 1,720 gal. LV-4.

The buyer is the director general of supply and development in Karachi.

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AT CARLSBAD, NEW MEXICO

Stafford Beaubouef

Robert Gibbs

afford Beaubouef, obert Gibbs Join rand River Chemical

TULSA—The appointment of Staf- rd Beaubouef and Robert Gibbs to e sales staff has been announced the Grand River Chemical Divi- on of Deere & Co.

Mr. Beaubouef will be sales repre- ntative for the company in Louisi- a and surrounding territory. He s graduated from Louisiana State niversity in 1947 and until 1952 was associate county agent in Louisi- a. In 1952 he assumed a position with the Gibbs Implement Co. as sales and public relations representative at Shreveport, La. In his new duties Mr. Beaubouef will headquarter in Shreveport.

Mr. Gibbs assumes the position of sales representative in the Iowa-Illinois area. Before joining Deere & Co. he was with Lincoln Service & Supply Co. as sales manager for its Falls City Fertilizer plant. From 1949 until 1952 he served with the Fairmont Foods Co. as feed sales representative. He is a graduate of Northwestern University at Evanston, Illinois. In his new position, Mr. Gibbs will live in Des Moines.

Gloomicides

A minister who was driving unusually fast was telling his passengers about a wreck he had seen. Then he added: "I've come close to having several wrecks, but the good Lord was with me."

One of the passengers whispered: "If he doesn't slow down, the good Lord won't be able to keep up with him."

★

This is the season when, young or old, a man's fancy turns wistfully to thoughts of a self-cleaning garage.

★

A person has to work himself to death to buy labor-saving devices these days.

★

The judge had up before him a criminal who was accused of robbing a bank. "Son," said the judge, "I hate to pronounce this sentence on you. I knew your folks and they were both fine people. But it is now my sad duty to sentence you to 30 years at hard labor."

The prisoner was stunned. Finally collecting his wits he said: "But, your Honor, it ain't but 20 years for robbing a bank."

"That was the old law," explained the judge patiently. "Under the new law you get 30 years."

"Can I send a message to my friends, Judge?" asked the prisoner. "I want to tell them about this new law. They're still robbing banks under the old law."

★

The golfer had lost his ball, and got unnaturally was inclined to be annoyed with his Negro caddie.

"Why didn't you watch where it went?" he asked angrily.

"Well, sah," said the boy, "it don't usually go no where, so hit took me unprepared like."

★

July is the month when the farmers let the cows out of their barns and let the actors in.

USDA Determining Irrigation Needs For Southeast States

WASHINGTON—Long-time weather records are helping scientists to determine irrigation needs in five South Atlantic States, the U.S. Department of Agriculture reports.

Cooperative studies by the department, the U.S. Weather Bureau and the state agricultural experiment stations of North Carolina, South Carolina, Virginia, Georgia and Florida are showing that irrigation requirements can be predicted with considerable accuracy for areas where weather records are available and soil types are known.

Part of this work, designed to aid farmers in planning and using irrigation, involves experiments with electronic atomic-particle counters for measuring soil moisture.

Soil scientist Dr. C. H. M. van Bavel, who is in charge of this research, hopes to obtain in a few years, from the fundamentally statistical studies now under way, information that will greatly reduce the number of years expensive field experiments must be run. Headquartered at Raleigh, N.C., Dr. van Bavel is employed jointly by USDA's Agricultural Research Service and the North Carolina Agricultural Experiment Station.

Making use of 25 years of Weather Bureau records, the cooperating research workers have now completed drouth-probability determinations for North Carolina. Work is moving ahead on similar determinations for the other cooperating states.

DU PONT STOCKHOLDERS

WILMINGTON—E. I. du Pont de Nemours & Co., Inc., was owned by 155,297 stockholders as of Sept. 30, 1955, an increase of 2,442 over the number of holders recorded at the close of the first half-year, June 30, 1955, and an increase of 6,337 over the number as of Sept. 30, 1954. There were 140,080 holders of common stock, and 21,613 holders of preferred stock as the third quarter of 1955 ended. These figures include 6,396 holders of more than one kind of stock.

Western Canadian Weed Control Conference Planned

WINNIPEG—The eighth Western Canadian Weed Control Conference will be held in Regina, Sask., Nov. 29-30. The program will feature a panel discussion of "Legislation in Weed Control Programs," with participants including a representative of the Department of Agriculture for Saskatchewan, Alberta, Manitoba, and British Columbia, respectively.

All items on the full two day program will deal with weed problems and control methods as they relate particularly to the four western provinces.

Chemicals are playing a greater part in weed control methods yearly, and speaking at the recent conference of the Canadian Agricultural Chemical Assn. at Ste. Adele-en-Haut, Quebec, H. W. Leggett, of the federal Department of Agriculture, estimated that western farmers had lost 140,000,000 bu. of grain in 1954 due to heavy weed infestations. He pointed out that of the 45,600,000 acres planted to cereal crops in the four western provinces slightly more than 25% were sprayed with 2,4-D chemical weed killer. In 1947, only 500,000 acres were sprayed. Mr. Leggett contended that farmers in Western Canada should be spraying 30,000,000 acres of weed infested grain annually.

The Regina Conference will devote a good part of the program to chemical weed control.

AGRONOMIST DIES

LEXINGTON, KY. — Sadocie C. Jones, 75, University of Kentucky agronomist credited with much of the state's liming and fertilizer program, died recently. He had been in semi-retirement since 1951.

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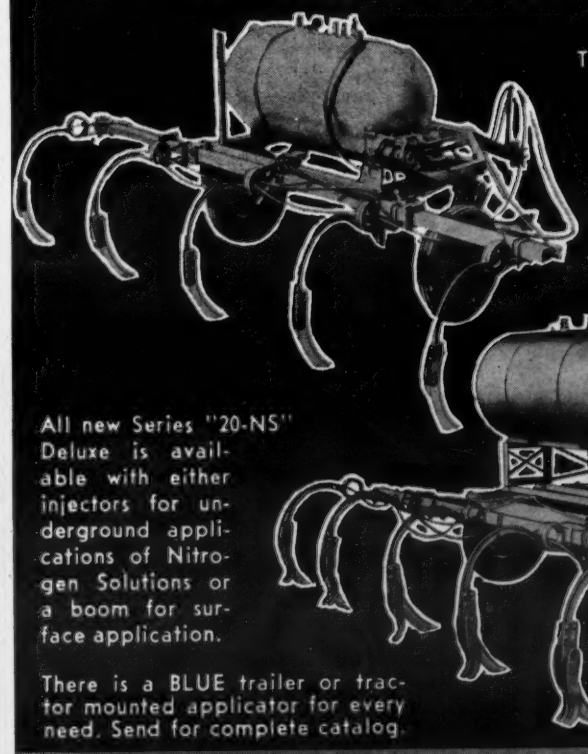

The BLUE Series 10 for Anhydrous Ammonia Fertilizer distributor for both row crop and broadcast applications.

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SOILS and FERTILIZERS

Fourth Edition

By FIRMAN E. BEAR, *Research Specialist, New Jersey Agricultural Experiment Station.*

In plain language, this new edition tells how recent *modern* advances in soil technology affect plant growth and annual yield . . . and how the effective use of basic methods can increase the productiveness of farm lands. New facts, accurate figures, and 66 pointed illustrations show the relation between crops and soils.

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DIAMOND

(Continued from page 1)

South Dakota, Nebraska, Wyoming, Montana, and Colorado.

Dr. Ferguson stated that this move is being made primarily in the interest of intensifying Geigy's activities in the marketing of DDT and Methoxychlor and the further development and production of several new agricultural chemicals, products of the company's extensive long-range research program.

Among Geigy's recent contributions to the agricultural chemicals industry are Diazinon, a fly killer; Chlorobenzilate, used in controlling various species of mites attacking fruits and ornamentals; and Sesquestrene brand metal chelates for correction of minor element deficiencies in plants.

Geigy Chemical Corporation, with headquarters in New York, is also one of the world's foremost producers of dyestuffs, pharmaceuticals, and agricultural and industrial chemicals. Geigy's broad research activities led, in 1939, to the discovery of DDT insecticides by Dr. Paul Mueller, an achievement which earned him the Nobel Prize.

Diamond Black Leaf Company was formed in February of this year. The new firm, which absorbed the operations of the Black Leaf Products Division of Virginia-Carolina Chemical Corporation, Richmond, Virginia, manufactures and markets the Black Leaf line of insecticides, herbicides and fungicides.

Mr. Scoville said operation of the Des Moines agricultural chemical plant "gives Diamond Black Leaf its fifth formulating facility, the others being located at Richmond, Virginia; Louisville, Kentucky; Montgomery, Alabama, and Waco, Texas.

"With this modern plant, Diamond Black Leaf is now in a strategic position to make and market in the Mid-West, 2,4-D weed killers and other chemical 'tools' for Mid-western farmers for control of weeds, insects and plant diseases at lower cost. At the same time, the Des Moines operation gives added stimulus to the company's rapid growth as a primary producer of both basic and specialized chemicals to relieve major infestations and meet a wide range of other agricultural requirements."

The plant is located near the edge of Des Moines on a 20-acre site and incorporates all the latest features for efficiently processing agricultural chemicals. The production area completely mechanized, occupies both wings of the 35,000 sq. ft. single-story structure. One area is devoted entirely to the manufacture, blending and packaging of herbicides, the other to insecticides. The plant is also equipped with a complete control laboratory to keep a constant check on uniformity of product. The brick building is located a short distance from the plant. Rail sidings are connected to the Burlington railroad.

Sales and office personnel at the plant number about 15, and production employees vary between 15 and 40, depending upon seasonal requirements. Diamond Black Leaf expects to maintain current operations at Des Moines with present personnel, Mr. Scoville said.

He also said that Emil C. Gerdes, Mid-western manager for Geigy Agricultural Chemicals, is joining the Diamond Black Leaf organization in a similar capacity. Formerly a distributor of agricultural and other chemicals at Burlington, Iowa, for a number of years, he has been associated with Geigy in his present position since 1948.

PACIFIC PLANT FOOD

(Continued from page 1)

Tools for Broadening the Fertilizer Market," Dr. Coleman reviewed some of the principal activities of the National Plant Food Institute, and urged the Pacific Northwest group to take advantage of their availability.

Dr. Coleman predicted that net farm income will not be allowed to drop much further in the next five-year period because of "political considerations." He insisted, however, that further increase in plant food consumption will have to depend on an increase in the sales effort by the industry, both collectively and individually.

"With a broadened sales effort," he told the manufacturers, "We can make this fertilizer market as big as we want to." He then outlined the work of the NPFI in developing "sales tools" for use in an increased effort.

Following the same theme of intensified sales effort and increased dealer education, a special committee of the association met during the convention to map preliminary plans for the first of a series of dealer education meetings. The first such session is scheduled to be held Jan. 18, at Oregon State College, Corvallis. It will feature a program planned to give practical information to fertilizer dealers in western Oregon.

Karl Baur, Pacific Supply Cooperative, Portland, is serving as chairman of the association's committee planning the project, and Thomas Jackson, soils department, Oregon State College, Corvallis, is serving as program chairman. The meeting will be sponsored jointly by the association and the college.

Reports of college work on certain local crops and definite recommendations in regard to fertilizer needs will be presented to the dealers. Progress reports on work not yet far enough along to result in specific recommendations, also will be presented, as will information on the mechanics of soil testing. Indicated trends as to the soil fertility levels in western Oregon will be summarized in reports of soil testing work to date.

The western Oregon dealer education meeting will be the first such meeting in the area to have joint sponsorship by the association and the college and increased efforts to publicize the meeting and stimulate dealer attendance will be made. It is anticipated that the Jan. 18 meeting will be the first of a series of such dealer meetings under this sponsorship, with each future meeting being planned to be of instructional value to specific agricultural areas in the region.

Also holding planning sessions during the convention was the soil improvement committee of the association under the chairmanship of F. T. Tremblay, Washington Farmers Cooperative Assn., Seattle. This group was making program plans for the seventh annual Pacific Northwest Regional Fertilizer Conference scheduled at the Chinook Hotel in Yakima, Wash., next June 28-30. Grant Braun, American Potash Institute, Portland, was named the new chairman of the committee and Nels Benson, Washington State College Tree Fruit Experiment Station, Wenatchee, Wash., is serving as program chairman.

J. D. Patterson, assistant chief of the Oregon State Department of Agriculture, Salem, was a featured speaker at the Nov. 2 session, reporting on enforcement problems. Citing the growth in the use of fertilizer-insecticide mixtures, Mr. Patterson pointed out the need for an industry program to insure adequate safety and health measures in the sale and handling of these products. He said a liaison committee formed of representatives of the state board of health, the state college, and the state department of agriculture is giving attention to this development.

The state economic poisons law applies to fertilizer-insecticide mixtures and he urged that fertilizer manufacturers familiarize themselves with the provisions of the law and make certain their operations are within its regulations. He particularly urged attention to an adequate safety program to avoid a demand for further restrictive legislation.

Featured luncheon speaker on Nov. 2 was Dr. William A. Paarl, administrator of the Bonneville Power Administration, Department of the Interior, Portland, who explained the electric power situation in the Pacific Northwest and cited the importance of power to the continued growth of agriculture and industry in the area.

Burton Hutton, state 4-H club leader, Corvallis, was scheduled to address the convention the morning of Nov. 3 on "Increased Yields," and reports on the farm demonstration projects sponsored by the association were to be a feature of the morning session of the last day of the meeting.

PHILLIPS

(Continued from page 1)

tions under consideration at the present time.

Adams and Fish pointed out that many factors have to be considered before a specific location can be chosen, including the availability of adequate transportation facilities, labor and housing, suitability of the soil for foundations and the proximity of the property to Pacific Northwest Pipeline Corporation's natural gas pipeline from the San Juan Basin of northwestern New Mexico and southwestern Colorado. Phillips Pacific Chemical Company has arranged with Pacific Northwest Pipeline Corporation for a supply of 15 million cubic feet daily of natural gas as raw material for the manufacture of ammonia.

Meanwhile, Phillips engineering personnel are working on designs for the plant and procurement of equipment. The initial unit will produce 200 tons daily of anhydrous ammonia. It is expected that the plant will be placed in operation late in 1956, making fertilizer available to distributors in the Intermountain, Inland Empire and Pacific Northwest regions for the spring season of 1957.

The plant is said to be the first new industry in the area to result from the availability of natural gas.

AMERICAN POTASH DIVIDEND

LOS ANGELES—The board of directors of American Potash & Chemical Corp. has declared quarterly cash dividends of 62½¢ a share on the Class A and Class B stocks payable Dec. 15, 1955, to stockholders of record Dec. 1, 1955, and a stock dividend of 4% payable in Class B stock Jan. 9, 1956, to Class A and Class B stockholders of record Dec. 1, 1955. The directors also declared the quarterly dividend of $1 a share on the $4 cumulative preferred stock, Series A, payable Dec. 15, 1955, to shareholders of record Dec. 1, 1955.

Floyd J. Gunn Named Manager of Dow Los Angeles Office

MIDLAND, MICH.—The advancement of Floyd J. Gunn to manager of the Dow Chemical Co.'s Los Angeles office has been announced by Donald Williams, vice president and director of sales. Mr. Gunn has served as manager of coatings sales for the company's plastics department for the past six years.

He succeeds Homer L. White who has held the post since 1950 and will now take over an assignment on the company's production control staff in Midland.

The Los Angeles office services Southern California, Arizona and the southern tip of Nevada. It handles all Dow product groups, industrial and fine chemicals, plastics, agricultural chemicals and magnesium.

Mr. Gunn, who came to the company in 1939, was with solvents sales for over a year, part of the time with the St. Louis office. He was a member of the Chicago office staff from 1945 to 1949.

CENTRAL FARMERS

(Continued from page 1)

rock phosphate for shipment to fertilizer acidulating plants.

The same equipment will also be used later in preparing the phosphate ores as a furnace charge for the 35,000 KW electric furnace planned for construction in 1957. Electric energy for this furnace will be supplied by Utah Power and Light Company under an agreement now being worked out with Central Farmers Fertilizer Company. Electrical energy has been the delaying factor on the project.

The furnace will extract from the ores, elemental phosphorus which will then be converted to concentrated fertilizer material. Initial production will be at the rate of approximately 100,000 tons of this product annually.

The phosphate ore for these operations will originate in the company's property in the Georgetown Canyon. Surface mining operations will produce about 500,000 tons of ore annually in the initial operation.

Central Farmers Fertilizer Company will ship its concentrated fertilizer materials to some 22 fertilizer plants operated by its members in 12 midwest states. At these plants the concentrated phosphate will be combined with nitrogen and potash to produce complete fertilizers of high analysis.

Central Farmers Fertilizer Company is an agricultural cooperative corporation owned by 16 midwest state and regional agricultural cooperatives. In addition to the completed phosphate operation in Idaho, the company is a part owner of the Cooperative Farm Chemical nitrogen plant at Lawrence, Kansas and has an interest in a new nitrogen plant being constructed in St. Paul, Minnesota by St. Paul Ammonia Products, Inc., for whom it will be the exclusive distributor. The home office is in Chicago. Montpelier, Idaho will be the headquarters of the western operation. Taylor Darden of Montpelier is resident manager.

BIGGER FARMS

ST. PAUL—The average Minnesota farm is growing larger, according to University of Minnesota agricultural economists. In southern and western counties, there were 9% fewer farms in 1954 than in 1939. Average farm size rose from 187 to 206 acres. In northeastern counties, which had tended to have very small farms, the trend toward larger farms was very strong.

MILLER LAW EXTENSIONS

(Continued from page 1)

tended effective dates for the same sticide chemicals for use on the me raw agricultural commodities eviously published . . ."

Following are the pesticides on hich the fully effective date has en extended to Jan. 22, 1956:

Aldrin: For use on berries of the amble type, blueberries, dates, pineples, strawberries, beans (including ack-eyed peas and soybeans), beets ugar, including tops), broccoli, cabge, carrots, corn, cucumbers, onions, anuts, peas and cowpeas (including rage), tomatoes, grains (including ts, rye, barley, wheat, rice), buckheat, grain forage, legumes for forge (including clovers, alfalfa, peat hay), grass crops (pasture and nge grass), mint (including spearint and peppermint).

Allethrin: On livestock.

Calcium cyanide: As a grain fuigant.

Chlordane: On forage crops (inuding grass), sweetpotatoes, grains, ttonseed, sugarcane.

Dieldrin: On berries of the bramble pe, blueberries, citrus fruits, grapes. ums and prunes, strawberries, beans ncluding black-eyed peas and soyeans), cabbage, corn, cucumbers, ttuce, melons (including cantaloups nd muskmelons), peanuts, peas and owpeas, potatoes and sweetpotatoes, rains (including oats, rye, barley, heat, rice), buckwheat, grain forge, legumes for forage (including overs, alfalfa, peanut hay), grass ops (pasture and range grass, timhy, grass hay), sorghum, sorghum rage.

Endrin: On cabbage, sugar beets.

EPN (O-ethyl-O-paranitrophenyl enzene thiophosphonate): On grapes, uts, (including pecans, walnuts and monds), tomatoes, olives, onions, ttonseed, sugar beets.

Ethylene dibromide: As a soil fuigant.

Ferbam: On almonds.

Hydrocyanic acid: As a fumigant r grains, dried peas and beans, and ut meats.

Lindane: On forage crops (alfalfa, over), meat, grain (from treating orage bins).

Methoxychlor: On carrots, curants, gooseberries, pasture grasses, rage legumes (alfalfa, clovers, peauts, cowpeas, soybeans), peanuts, int, meat, grains.

Methyl bromide: As a fumigant.

Parathion: On forage crops (alfa, clover, peas, pangola grass, mothy, vetch), field crops (barley, rn, oats, wheat), hops, olives.

Phygon (2, 3-dichloro-1, 4-naphthoinone): On celery, tomatoes.

Piperonyl butoxide: On apples, citus, livestock, pears, tomatoes, grains.

Pyrethrins: On apples, citrus, grains tored), livestock, pears, tomatoes.

Toxaphene: On cranberries, plums nd prunes, beets, turnips, rutabagas, gar beets, horseradish, parsnips, llards, kale, mustard greens, spinh, Swiss chard, peppers, pimentos, wpeas, grains (including oats, rye, rley, wheat, rice, sorghum grain), ckwheat, nuts (including pecans, lnuts, hazelnuts, hickory nuts), gumes for forage (including clovers, lfalfa, soybean hay, peanut hay, spedeza, cow pea hay), grass crops asture and range grass, timothy, ass hay), grain forage (including rn and sorghum), sugarcane, meat.

Zineb: On pecans, hops, mushrooms.

Ziram: On almonds, pecans, strawrries.

Effective date March 1, 1956, has en set for the following chemical oducts:

Acrylonitrile, as a fumigant; **benne hexachloride,** in meat; **butoxyolypropylene glycol,** in animal fly rays; **carbon bisulfide,** as a grain migant, and **carbon tetrachloride,** a grain fumigant.

Chlordane, in meat; **chloropicrin,** a grain fumigant; **copper carbone, basic,** on pears; **DDT,** in meat; **ethylene dibromide,** as a grain fumigant; **ethylene dichloride** as a grain fumigant on citrus and strawberries; **sodium orthophenylphenate tetrahydrate.** on apples and pears, and **trichloroethane,** as a grain fumigant, on citrus and strawberries.

Employment in California Chemical Industry Climbs

SAN FRANCISCO — Employment in the chemical industry in California has climbed by almost 1,000 during the 12-month period from August of last year to August of the current year.

According to a report of the Division of Labor Statistics and Research of the California State Department of Industrial Relations, there were an estimated 36,700 wage and salary workers employed in the manufacture of chemical products in California during August, 1955, and 35,800 the previous August. Employment held steady between July and August of this year and did not show a drop between the two months registered last summer.

The production workers in these plants continued to earn wages at a rate higher than the average for nondurable goods producers and all manufacturing production workers. The average earnings for the month of August was at the rate of $88.13 a week, as compared with $78.43 for all non-durable goods, and $85.02 for all manufacturing.

There was a gain of $4.22 a week from the August 1954 average earnings of $83.91. The hourly earnings for the two Augusts were $2.14 and $2.03 respectively.

California Growers Warned of Spotted Alfalfa Aphid

SAN FRANCISCO — Growers of alfalfa in California must be constantly on the alert for the spotted alfalfa aphid which is becoming a serious threat in the state.

This advice was given to a large group of northern California farmers by Dr. Ray F. Smith, entomologist at the University of California, at a meeting of the agricultural group in Glenn County. Terming the pest "devastating," Dr. Smith said that "the appearance of honeydew in an alfalfa field is the key signal to watch for."

As soon as the honeydew is determined, he continued, "it should be promptly treated by spraying with either parathion, malathion or systox."

He said that despite the seriousness of the pest "prompt action taken after growers find evidence of the aphid in their fields will effect reasonable economic control of its depredations."

Dr. Smith reported that the aphid has spread from the Colorado desert areas in southern California to Tehama County in the north. He suggested early treatment with 8 to 12 oz. of technical malathion per acre, 2 to 4 oz. of parathion, or 2 to 4 oz. of systox.

Farm advisors of Butte and Glenn counties, also addressing the agricultural meeting, advised the farmers that under new state regulations growers planning to use parathion or malathion must first obtain permits. A circular on the spotted alfalfa aphid has been prepared by the California Agricultural Experiment Station Extension Service by entomologists R. C. Dickson and H. T. Reynolds. It is available for distribution to growers through the Division of Agricultural Sciences of the University of California.

POTASH DELIVERIES IN NORTH AMERICA

	Short Tons K_2O			
	Jan.-Sept., 1955	Jan.-Sept., 1954	July-Sept., 1955	July-Sept., 1954
Muriate	1,367,024	1,329,117*	301,459	316,883*
(Imports)	(60,079)	(47,372)	(....)	(....)
Manure salts	1,007	1,022	220	180
Sulphate and sul. pot. mag.	86,582	90,250*	18,329	24,238
(Imports)	(14,879)	(13,150)	(....)	(....)
Total agricultural institute territories	1,454,613	1,420,389*	320,008	341,301*
Chemical	84,680	65,084	27,384	20,869
Other exports	61,956	6,401*	40,427	3,603*
GRAND TOTAL	1,601,249	1,491,874	387,819	365,773
(Imports)	(74,958)	(60,522)	(....)	(....)

*Revised.

NOTE: Imports for the first five months are included in the totals for the first nine months of 1955. Import figures in parentheses are included in the total figures immediately above them. No import data are available at this time for the third quarter of the calendar year.

POTASH DELIVERIES

(Continued from page 1)

K_2O, an increase of 871% in salts and 868% in K_2O over the same period in 1954.

The seven major American potash producers delivered 653,662 tons of potash salts containing an equivalent of 387,819 tons K_2O during the third quarter of 1955, an increase of 5% in salts and 6% in K_2O over the same period in 1954. Agricultural deliveries in the United States, Canada, Cuba, Puerto Rico, and Hawaii amounted to 542,769 tons of salts, equivalent to 320,008 tons K_2O, a decrease of 7% in salts and 6% in K_2O.

These deliveries were comprised of 493,058 tons of muriate of potash, 888 tons of manure salts, and 48,823 tons of sulphate of potash and potash-magnesia. The chemical industry took 44,096 tons of muriate of potash and sulphate of potash, containing an equivalent of 27,384 tons K_2O, an increase of 31%. Exports outside of North America amounted to 66,797 tons of salts containing 40,427 tons K_2O, an increase of 1,025% in salts and 1,022% in K_2O.

TO HEAR TVA CHAIRMAN

NASHVILLE—Brig. Gen. Herbert D. Vogel, chairman of the Tennessee Valley Authority board of directors, will be one of the speakers at the Tennessee Farm Bureau's annual convention here Nov. 13-16. Tom J. Hitch, president of the Federation, said the TVA chairman will discuss several aspects of the TVA program. The convention is expected to make policy and adopt resolutions on such subjects as crop controls, parity and TVA, as well as on a dozen or more other subjects of state and national importance.

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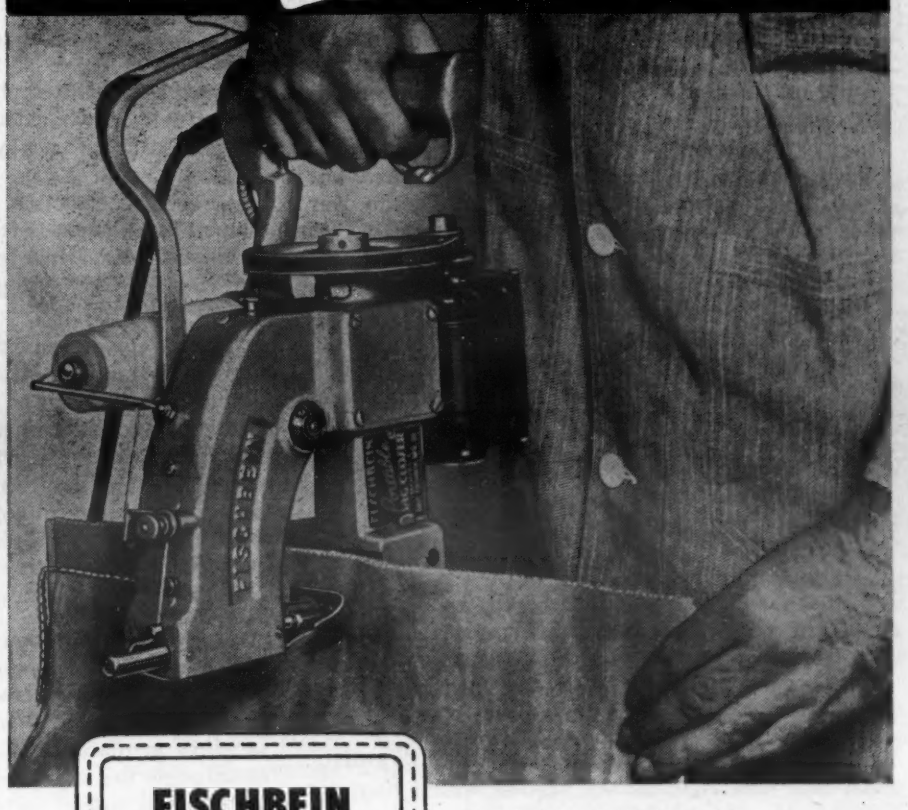

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A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Southern states.

Station Anniversary

Observance of its 75th birthday by the New Jersey Agricultural Experiment Station recently calls attention, once more, to the tremendous influence exerted over the years by these state institutions. Their total efforts in research and education have been of incalculable benefit to our whole economy.

Although not the oldest of our state experiment stations, the Rutgers University institution is certainly one of the most venerable and deserving of congratulations at this time.

However, despite all the good work done by scientists at this and all the similar stations throughout the U.S., there is still a long way to go before agricultural science is applied to an optimum degree. The widest sort of opportunity is still open to the research scientist.

Crops in America are still threatened to various degrees by some 30,000 known plant diseases. Every time one of these is brought under control, we raise useful production without adding one square inch to the land under cultivation.

Meat output is cut some 10% annually by the depredations of livestock diseases and parasites. Reduction of this loss, even by a few percentage points, would mean much to the economy.

The ravages of mice, rats and insects destroy enough grain in the U.S. each year to feed an estimated 10 million hogs or the equivalent of two billion pounds of pork. And an estimated one fourth of all the fruits and vegetables grown in the U.S. and Canada spoil before they reach the homes of consumers.

To control agricultural pests of this nature would add up to 10% the number of persons who could be fed and clothed from the present output of our farms. This challenge is certainly one for the experiment stations to tackle in each state. Not that there has been laxity in this regard, but rather, that the problem becomes more acute over the years as populations grow.

The agricultural experiment station, as proved over more than three quarters of a century, is capable of finding the answers to many of the present brow-wrinkling problems. It will take time, but the experiment station idea is certainly here to stay and it is interesting to contemplate what the next 75 years may bring forth.

Perhaps the people of the year 2030 will look back on our age as one in which benighted people allowed pests to consume a sizeable portion of their food and fiber supply. Doubtless there will be new problems for people of that future day to wrestle with, but it is a fairly safe guess that the workers of the various state experiment stations will be in there pitching just as they have been for many years past.

Probably this is a good time to congratulate not only the New Jersey station which happens to be observing its 75th anniversary, but at the same time to give a salute to all of its sister stations for their good work.

Ten Years of FAO

The tenth anniversary of the Food and Agriculture Organization of the United Nations has just recently been observed in appropriate ceremonies at Quebec, Canada. It seems worthwhile at this point to review the progress made by FAO toward improving world food and agriculture.

Many will remember vividly the hectic war days of 1943 when amidst the general turmoil, representatives of governments of some 45 countries got together in the U.S. to seek ways to banish hunger and establish a stable agriculture in the world. It was thought that the idea of international cooperation might be kept alive in the world if the common denominator of agriculture were to be emphasized aside from political issues.

Thus, out of this grew the world-wide organization which had as its goal the assurance of adequate food supplies for the global populations.

FAO's activities were centered mainly in three fields: the collection and dissemination of information; providing technical assistance where needed, and the promotion of national and international action where needed.

During the past decade, FAO notes, great strides have been realized in agricultural production throughout the world. In 1954, total output of agricultural commodities was 25% greater than the 1946-47 figure, exclusive of Communistic countries. The world is now producing 20% more rice, milk and cotton than before the war; about 30% more wheat, fats and meat; 50% more fruit and sugar; and 80% more natural rubber.

Although increased agricultural activity throughout the world has been seen ever since the end of World War II, probably no single force can be credited for this advancement. Undoubtedly FAO has had an important role in this regard and will continue to be a factor in the development of world agriculture.

Thus the Food and Agriculture Organization gets a nod of recognition after its first decade of activity. With increasing populations in all parts of the world, the matter of providing greater quantities of food per capita is of growing concern.

Safety By-Products Cited

That safety in a plant and human relations are actually "two sides of the same coin" was pointed out strongly by Max. W. Foresman, Spencer Chemical Co., at the recent meeting of the Fertilizer Section of the National Safety Council in Chicago. It is a thought that could well be allowed time for reflection in the minds of fertilizer management people, since it deals with such a basic matter.

The safety movement in fertilizer plants, both large and small, is developing a number of by-products in addition to lessening the numbers of accidents and getting more favorable consideration from insurance firms in the form of lower premiums. It is resulting in the employees catching the idea that employers are interested in the worker's welfare. This in turn makes for better employee attitudes and results in less of a tendency toward carelessness and chance-taking.

Some of the other safety men present at the conference backed up Mr. Foresman's observation. Incidents in their own experience were recalled where the entire atmosphere in plants had been greatly improved through the management's showing an interest in safety instruction.

A safety program should include a two-way system of communication wherein both the management and the working force have a means to understand the problems of the other. This, it was pointed out, opens up new opportunities to side-step barriers which may have arisen over the years.

All of these considerations make sense, and as has been pointed out, sometimes the by-products of getting in step with the safety movement, are valuable indeed. It is always emphasized by safety officials that small plants stand to gain as much, or more, than do large ones. It should be remembered by many small plants that they, too, are part of the fertilizer industry and that their support of the safety program benefits everyone; particularly the small plant itself.

CROPLIFE is a controlled circulation journal mailed to those responsible for the production and distribution of fertilizer and other farm chemicals and to retail dealers of the agricultural chemical industry in the U.S. To those not on the controlled list, CROPLIFE is available at $5 for one year, $9 for two years ($8 a year outside the U.S. and possessions). Single copy price, 25¢.

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MEETING MEMOS

Nov. 8-10—17th Annual New York State Insecticide, Fungicide and Application Equipment Conferences; Bibbins Hall, G.L.F. Exchange, Ithaca, N.Y.; C. E. Palm, Cornell University, Ithaca.

Nov. 9—Conference for Fertilizer Manufacturers, Dealers and Salesmen, University of Maryland, College Park.

Nov. 9—Soils School for Fertilizer and Lime Dealers, Lipman Hall, Rutgers University, New Brunswick, N.J.

Nov. 9-10—Oregon Weed Conference, Senator Hotel, Salem, Rex Warren, Oregon State College, Conference Secretary.

Nov. 11-13—Texas Aerial Applicators Assn., Annual Convention, Corpus Christi, Texas.

Nov. 14-19—Idaho Weed Control Short Course, University of Idaho, Moscow.

Nov. 16—Pesticide Dealers Conference, Rutgers University, New Brunswick.

Nov. 16-17—Ohio Pesticide Institute's Ninth Annual School and Conference, Ft. Hayes Hotel, Columbus, Ohio. J. D. Wilson, Ohio Agricultural Experiment Station, Wooster, Secretary.

Nov. 18—Arkansas Fertilizer School, Little Rock.

Nov. 22—Manufacturing Chemists' Assn., Semi-Annual Meeting and Winter Conference, Statler Hotel, New York.

Nov. 28-Dec. 1—Entomological Society of America, Netherlands Plaza Hotel, Cincinnati, Ohio.

Nov. 29—Fertilizer Short Course, North Dakota Agricultural College, Fargo.

Nov. 29-30—Western Canadian Weed Control Conference, Regina, Sask.

Nov. 29-30—Land Use Forum, Kansas State College, Manhattan, Kansas, Dr. R. V. Olson, Kansas State College, Chairman, Arrangements Committee.

Nov. 29-30—Oklahoma Plant Food Educational Society, Inc., Memorial Union Bldg. Oklahoma A&M College, Stillwater.

Dec. 2—South Dakota Fertilizer Dealers Short Course, South Dakota State College, College Station.

Dec. 5—Soils & Fertilizer Short Course, Institute of Agriculture, University of Minnesota, St. Paul Campus.

Dec. 5-7—Agricultural Ammonia Institute, Kansas City; Jack F. Criswell, Executive Vice President, Claridge Hotel, Memphis, Tenn.

Dec. 5-7—Chemical Specialties Manufacturers Assn., 42nd Annual Convention, Roosevelt Hotel, New York; H. W. Hamilton, 50 E. 41st St., New York 17, N.Y., Executive Secretary.

Dec. 8-9 — Michigan Fertilizer and Lime Conference, Michigan State College, East Lansing.

Dec. 15-16—Beltwide Cotton Production Conference, Hotel Peabody, Memphis, Sponsored by the National Cotton Council.

Dec. 28-30 — American Phytopathological Society, Atlanta, Ga.; Glenn S. Pound, University of Wisconsin, Madison, Wis., Secretary.

Dec. 29—Symposium on Health Hazards of Chemicals, before the Pharmacy Section at Annual Meeting of American Association for the Advancement of Science, Atlanta.

1956

Jan. 4-6—Weed Society of America, Charter Meeting, Hotel New Yorker, New York; W. C. Shaw, U.S. Department of Agriculture, Beltsville, Md., Secretary-Treasurer.

Jan. 5-6—Second Annual Mississippi Insect Control Conference, Mississippi State College.

Jan. 10-11—Eighth Annual North Carolina Pesticide School, North Carolina State College, Raleigh.

Jan. 11-12—Wisconsin Insect Control Conference, Lorraine Hotel, Madison, Wis.

Jan. 15-17 — New Mexico Grain & Feed Dealers Assn., Annual Convention, Hilton Hotel, Albuquerque, with Special Portion for Fertilizer and Farm Chemical Dealers; H. B. Hening, Albuquerque, Secretary.

Jan. 16-18—Northwest Vegetable Insect Control Conference, Imperial Hotel, Portland, Ore.

Jan. 16-18—Southern Weed Conference, Ninth Annual Meeting, Hotel Jung, New Orleans; Dr. E. G. Rodgers, Florida Agricultural Experiment Station, Gainesville, Secretary-Treasurer.

Jan. 26-27—Custom Spray Operators Training School, University of Illinois.

Jan. 26-29 — Agricultural Aircraft Assn., Inc., Sixth Annual Convention, Wilton Hotel, Long Beach, Cal.; Wanda Branstetter, Route 3, Box 1077, Sacramento, Cal., Executive Secretary.

Jan 27—Colorado Agricultural Chemicals Assn., Cosmopolitan Hotel, Denver.

Feb. 6-8—Agronomy Section, Association of Southern Agricultural Workers, Atlanta (Ga.), Biltmore Hotel; W. E. Colwell, North Carolina State College, Secretary.

Feb. 6-8—Cotton States Branch, Entomological Society of America, Biltmore Hotel, Atlanta, Ga. W. G. Eden, Alabama Polytechnic Institute, Auburn, Ala., secretary-treasurer.

Feb. 7-9 — National Garden Supply Trade Show, Kingsbridge Armory, New York City.

Feb. 14-16—Agricultural Chemicals Conference, Lubbock, Texas.

Feb. 15-17—California Weed Control Conference, Sacramento and Davis, Cal.; Oliver A. Leonard, Botany Dept., University of California, Davis, Cal., Secretary.

Feb. 15-17 — Western Weed Control Conference, Sacramento and Davis, Cal.; W. C. Robacker, U.S. Department of Agriculture, Nevada Agricultural Experiment Station, Reno, Nev., Secretary-Treasurer.

March 6-7—Fifth Annual Western Cotton Production Conference, Fresno Hacienda, Fresno, Cal.

March 14-18 — National Agricultural Chemicals Assn., Spring Meeting, Hollywood Beach Hotel, Hollywood, Fla., Lea S. Hitchner, NAC Executive Secretary, 1145 19th St. N.W., Washington 6, D.C.

June 28-30—Association of Southern Feed & Fertilizer Control Officials, 14th Annual Convention, Hotel Roanoke, Roanoke, Va.; Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 28-30—Seventh Regional Fertilizer Conference of the Pacific Northwest, Chinook Hotel, Yakima, Wash.

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BRADLEY & BAKER FEED • FERTILIZER

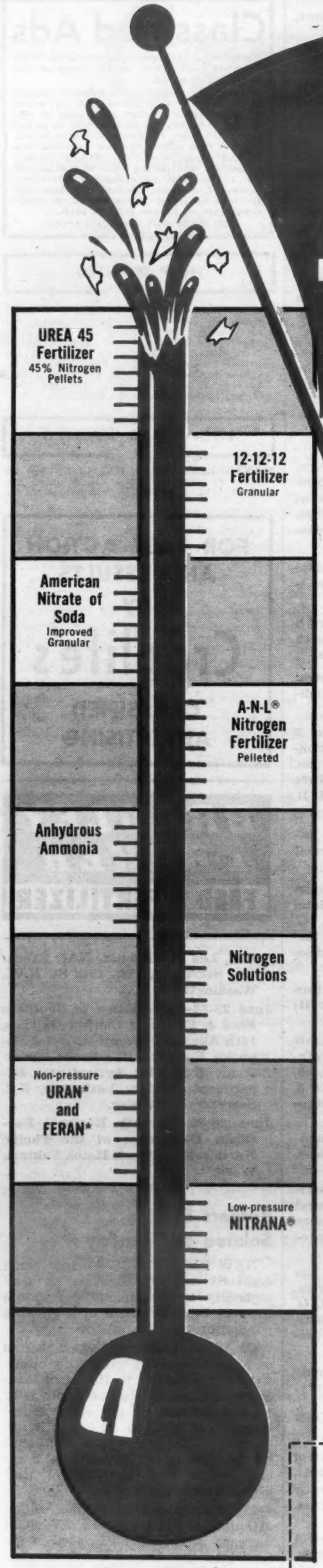
Rutgers Station Saluted on Birthday

NEW BRUNSWICK — Increasing demands will be made on farmers' ingenuity and on scientific research to meet the food needs of a growing population.

C. William Haines, assemblyman of Masonville, N.J., made this observation in remarks to 700 farm leaders who dined at Rutgers University to pay tribute to the Agricultural Experiment Station on its 75th anniversary. The event was sponsored by the New Jersey Agricultural Society, one of the organizations that helped found the Station in 1880.

Mr. Haines, a fruit farmer, called attention to the need for a 25% food increase in the next 25 years in his look into the future, based on current trends. This added production will come from higher yields per acre and per animal unit as well as from expanded acreage, he predicted.

Dr. William H. Martin, dean of the College of Agriculture and director of the Agricultural Experiment Station, contrasted farming of 1880 with that of today in his review of 75 years of achievement.



Arcadian®

...hottest line in FERTILIZER!

Every plowed and pastured acre is your market when you sell ARCADIAN, because every farm acre needs nitrogen to build bigger yields and profits. It's easy to develop this market with low-cost, fast-spreading, labor-saving ARCADIAN high-nitrogen fertilizers—the modern line that also includes balanced ARCADIAN 12-12-12, rich in nitrogen, phosphorus and potash.

ARCADIAN provides profitable products for every season and every system of application. You can sell nitrogen that's quick-acting and long-lasting...liquid or dry nitrogen...nitrogen in nitrate, ammonia and urea forms ...straight nitrogen and nitrogen balanced with other plant foods. You can supply nitrogen to use in ground spreaders, airplanes, sprayers, injectors, or in irrigation water. Sell ARCADIAN custom application, too.

Powerful ARCADIAN advertising – bigger than ever in 1956 – gives you strong backing for extra sales. Sell ARCADIAN and get the benefits of this national and local promotion in magazines, radio and newspapers.

Get ready now for the 1956 sales season. Make it a big-profit season for you. Write for full details on the fast-selling ARCADIAN line.

START TO BUILD SALES NOW!

- ☐ **UREA 45 Fertilizer** *45% Nitrogen Pellets*
- ☐ **12-12-12 Fertilizer** *Granular*
- ☐ **American Nitrate of Soda** *Improved Granular*
- ☐ **A-N-L® Nitrogen Fertilizer** *Pelleted*
- ☐ **Anhydrous Ammonia**

Nitrogen Solutions

- ☐ *Non-pressure* **URAN* and FERAN***
- ☐ *Low-pressure* **NITRANA®**

*Trade-Mark

NITROGEN DIVISION Allied Chemical & Dye Corporation
40 Rector St., New York 6, N. Y.

Please send me full information on products I have checked at left.

☐ Please have an ARCADIAN salesman call on me.

NAME_____

FIRM_____

ADDRESS_____

CITY_____ STATE_____